



CentreVu®

Internet Solutions Guide

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Ordering information

The order number for this document is 585-215-025. To order, see the “How to order this information product” on page xviii.

Support telephone numbers**Technical Support Telephone Number**

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This document was prepared by Avaya University, Denver, Colorado, U.S.A.

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About this information product

Purpose The *CentreVu® Internet Solutions Guide Issue 4 (585-215-025)* document provides an overview of elements of the product, 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 Solutions Guide is to provide documentation on the new features provided in Release 4.5 of CentreVu Internet Solutions.

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

Intended audience This guide is intended for anyone installing, configuring, administering or using CentreVu Internet Solutions, including agents, supervisors, trainers, Webmasters, and system administrators. This document is also useful to Avaya personnel in Technical Service Centers (TSC), Sales, the Design Support Center, the International Technical Assistance Center (ITAC), the Avaya Professional Services Organization, and the Centers of Excellence. It is also helpful for data networking security personnel, firewall administrators, and anyone else who might use or support CentreVu Internet Solutions.

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

- Overall configuration and connectivity of CentreVu Internet Solutions
- Data connectivity for CentreVu Internet Solutions with the contact center's network
- Operational details about CentreVu Internet Solutions
- DEFINITY Enterprise Communications Server (ECS) switch administration and connectivity for CentreVu Internet Solutions
- *CentreVu* Computer-Telephony connectivity and administration for CentreVu Internet Solutions
- Firewall and security issues relative to CentreVu Internet Solutions
- Troubleshooting for CentreVu Internet Solutions.

How to use this information product This information product contains 14 chapters, 3 appendices, and a glossary. The following information provides a brief description of each chapter and appendix.

Chapter 1 — About CentreVu Internet Solutions

Chapter 1 introduces and briefly describes CentreVu Internet Solutions. The information in Chapter 1 includes descriptions of components, features, requirements, and how the product works.

Chapter 2 — Prepare your contact center for CentreVu Internet Solutions

Chapter 2 explains how to prepare your contact center so that you can integrate CentreVu Internet Solutions quickly and effectively.

Chapter 3 — CentreVu Internet Solutions configuration

Chapter 3 provides the recommended configuration for CentreVu Internet Solutions as well as a description of each component of the product.

Chapter 4 — Install and uninstall the Internet session software

Chapter 4 describes, at a high-level, the procedures for installing the real-time software.

Chapter 5 — Install and uninstall the messaging software

Chapter 5 describes, at a high-level, the procedures for installing the messaging software and other related software such as *Microsoft SQL*-server.

Chapter 6 — Administration

Chapter 6 informs you of the administration required for CentreVu Internet Solutions. After you have installed and connected all necessary components, you must administer CentreVu Internet Solutions so that you can use all of its features and functions.

Chapter 7 — Agent login and logout

Chapter 7 describes how an agent logs in and logs out of CentreVu Internet Solutions.

Chapter 8 — How to process Internet sessions

Chapter 7 details how agents handle various types of Internet sessions. The call-handling information covers PagePop, Escorted Browsing, and Call Control Windows.

Chapter 9 — How to process messages

Chapter 9 describes how an agent handles various types of messages and also describes the functionality provided by the messaging software to handle those messages.

Chapter 10 — Reports

Chapter 10 discusses the reporting capabilities of the messaging software.

Chapter 11 — CentreVu Internet Solutions databases

Chapter 11 describes the messaging databases used by the messaging software.

Chapter 12 — Monitor and maintain CentreVu Internet Solutions

Chapter 12 covers basic monitoring and maintenance tasks.

Chapter 13 — Troubleshooting

Chapter 13 identifies problems that may occur during installation and operation of CentreVu Internet Solutions, and suggests diagnostic and corrective actions that can be taken toward their resolution.

Chapter 14 — Errors and error logs

Chapter 14 discusses CentreVu Internet Solutions errors and error logs.

Appendix A — Internet Pre-Route configuration

Appendix A discusses the Internet Pre-Route feature which includes functions, installation, and administration.

Appendix B — Using another CTI application

Appendix B contains information about using another Computer-Telephony Integration (CTI) application to log in to the DEFINITY ECS.

Appendix C — Handling browser security restrictions

Appendix C describes how to handle browser security restrictions that can interfere with forms sharing and page sending across domains.

Glossary

The glossary provides a list of terms and definitions that relate to CentreVu Internet Solutions.

Conventions used This document uses the following conventions:

Convention	Description
Internet sessions	Refers to the four types of Internet sessions: Internet voice and chat, chat-only, request for callback, and callback and collaborate.
Contact center	Refers to a call center that has installed CentreVu Internet Solutions and/or <i>Message Care</i> to be available to customers in ways in addition to by telephone.
Customer	Refers to the person using the telephone, the Internet, email, or a fax to communicate with the contact center.
Messages	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}/icmadmin</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, or primary button, unless the right, or secondary button is specified.
Terms	For definitions of terms and acronyms used in this guide, please see the “Glossary.”

- Related documentation** Many documents other than this guide pertain to CentreVu Internet Solutions. The most important external documents are:
- *DEFINITY* ECS documentation
 - *CentreVu* Computer-Telephony documentation
 - Web Page Guidelines documentation located on your CVuIS ICC Software CD-ROM.

Using this document This document includes information for CentreVu Internet Solutions. Standard installation and administration activities for components other than the messaging software and the real-time software (for example, *DEFINITY* ECS, *CentreVu* CMS, and so forth) are covered in the respective documentation.

About user-provided equipment

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

About user expertise

This guide assumes that the user is familiar with basic contact center operations and has the technical expertise to implement CentreVu Internet Solutions as described in this document.

How to order this information product

This document is the CentreVu Internet Solutions Guide, Document No. 585-215-025, Comcode 108507435, Issue 4, April 2001. To order this document, do one of the following:

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U.S.A.



1 About CentreVu Internet Solutions

Overview

Purpose This section introduces CentreVu Internet Solutions, including discussions of major components and system operations. It includes descriptions of features and elements of the product, and how the product is supported before and after the sale.

Audience This section is intended for anyone interested in an overview of CentreVu Internet Solutions.

Contents Specific topics covered in this section are as follows:

- New features for CentreVu Internet Solutions 4.5 (1-2)
- What is CentreVu Internet Solutions? (1-6)
- Key features of CentreVu Internet Solutions (1-9)
- What do you need to make CentreVu Internet Solutions work? (1-20)
- What is localized? (1-26)
- Where can I get CentreVu Internet Solutions assistance? (1-29)



New features for CentreVu Internet Solutions 4.5

Overview Release 4.5 of CentreVu Internet Solutions builds on the strengths of the previous release, thus enhancing established functionality while providing new features.

Release 4.5 of CentreVu Internet Solutions includes the following new features:

- Auto Sync (1-2)
- Prepend callback digits by arena (1-3)
- Agent Router enhancements (1-3)
- Network Address Translation support (1-3)
- Tomcat servlet engine for Windows (1-3)
- Agent applet tunneling (1-3)
- Agent interface enhancements (1-3)
- Avaya Web Voice Client (1-3)
- Administration encryption (1-3)
- Independent “Contact Us” page (1-4)
- Customer-side Audible Chat Indication (1-4)
- Join Us (1-4)
- Voice Consult (1-4)
- Conference/transfer for Agent Applet (1-4)
- Transcript enhancements (1-5)
- Avaya IP600 Voice over IP (VoIP) gateway (1-5)

Auto Sync The Auto Sync feature allows the customer's browser to follow the agent's browse sequence without the need for the agent to send each page. This feature works only from the agent side of the Internet session, and cannot be used simultaneously with the Telepointer feature. See the Web Page Guidelines documentation included on the CVuIS ICC Software CD-ROM for more information.

Prepended callback digits by arena	CentreVu Internet Solutions now allows the administration of prepended callback digits by arena rather than system-wide. Thus the digit(s) that the system automatically inserts before the callback number—whether simply 9 to access an outside line or 1+(country code) for an international call—can vary depending upon the arena in which the agent processes the callback.
Agent Router enhancements	Agent Router, the standard CentreVu Internet Solutions Computer-Telephony Integration (CTI) service, now runs as a process rather than as a servlet. In addition, Agent Router is available on Solaris platforms.
Network Address Translation support	Network Address Translation (NAT) support is now available for contact centers with servers that have different internal and external domain names.
Tomcat servlet engine for Windows	Contact centers using <i>Windows</i> -based servers now have the option of using the Jakarta Tomcat servlet engine in place of Allaire's JRun. It is recommended that new installations of CentreVu Internet Solutions use Tomcat, as JRun is being phased out for use with this product and will not be supported after this release.
Agent applet tunneling	If the firewall configuration of a contact center requires it, the CentreVu Internet Solutions Agent applet can now be administered for tunneling to the ICM server.
Agent interface enhancements	Release 4.5 of CentreVu Internet Solutions includes two agent interfaces: a multi-session Agent Control Window for handling multiple simultaneous Internet sessions, and a single-session Agent Control Window. Which window the agent uses to process Internet sessions is determined by the Agent Login page. For more information, see <i>Agent and Caller Control Windows (8-2)</i> .
Avaya Web Voice Client	The Avaya Web Voice Client (WVC) is a new alternative to using <i>Microsoft NetMeeting</i> as the customer-side Voice over IP (VoIP) client. The WVC is more compact, provides better voice quality, and is easier to use than previous voice clients.
Administration encryption	In release 4.5 of CentreVu Internet Solutions, administrators can only view system parameters through a 128bit encrypted connection to the administration servlet.

Independent “Contact Us” page	The independent “Contact Us” feature allows the customer to request an Internet session while continuing to browse the website. Rather than requiring the customer to leave the current page to go to another page to contact an agent, this feature opens a new frame that contains the Caller Control Window but does not completely obscure the original browser window. For more information, see the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM.
Customer-side Audible Chat Indication	During text chats, the customer-side audible chat indication notifies the customer of the following events: • Session is ringing an agent • Agent accepts the session • Customer receives a chat message • Customer sends a chat message • Customer's browser receives a Send Page URL Your contact center has the ability, on an arena-wide basis, to administer the sounds heard by customers and to disable the indicators entirely. For more information, see Arenas (1-15) and the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM.
Join Us	The Join Us feature allows a third party with Internet access to join an in-progress Internet session. Either the agent or the customer communicates a session-specific handle to the third party, who then uses the handle to log in to a Join Us website. For more information, see Using Join Us (8-29).
Voice Consult	The Voice Consult feature allows an agent to consult with a third party during an Internet session. The customer cannot hear voice interaction between the agent and consultant unless the agent establishes a conference. However, if the consultant is a logged-in agent then all three parties participate in Web-based interactions (such as text chat) from the beginning of the consultation. For more information, see Using Voice Consult (8-27).
Conference/transfer for Agent Applet	In addition to the conference and transfer features provided by the voice terminal or soft phone, an agent now has the ability to conference or transfer using controls within the Agent Applet. For more information, see Using Conference (8-25) and Using Transfer (8-26).

Transcript enhancements

Release 4.5 of CentreVu Internet Solutions includes the following enhancements to the transcript feature:

- In addition to recording chat text and visited URLs, the system records call event information
- An agent joining an Internet session by conference or transfer automatically receives the chat and URL transcripts of the entire session from the beginning.
- A manager can review the transcript of any session.
- *CentreVu* Internet Solutions supports transcripts for sessions in double-byte languages such as Japanese.

For more information about URL transcripts, see the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM.

Avaya IP600 Voice over IP (VoIP) gateway

The Avaya IP600 Internet Communications Server is a VoIP gateway solution that connects to your contact center's *DEFINITY* ECS by either Integrated Services Digital Network-Primary Rate Interface (ISDN-PRI) or by Internet Protocol (IP). For more information, see *Administering the Voice over IP Gateways* (6-33).



What is CentreVu Internet Solutions?

Introduction CentreVu Internet Solutions extends the *DEFINITY* ECS call center to the Internet, creating a multi-media contact center. Customers can interact with your contact center using an Internet application (for example, a Web browser or email client).

Internet sessions are established through the following media access types:

- Telephone callback—agent and customer communicate verbally using a regular telephone line
- Text chat—agent and customer communicate through text chat over the Internet and can share web pages and interactively fill out HTML forms
- Internet voice and chat—agent and customer communicate verbally through Voice over IP (VoIP) and text chat
- Email and fax messages—agent and customer communicate through email and fax over the Internet

In combination with the proper hardware (such as VoIP gateways), *CentreVu* Internet Solutions enables your contact center to implement one or any combination of these media access types.

In addition to providing a number of media access types, *CentreVu* Internet Solutions funnels Internet sessions and messages through the *DEFINITY* ECS, using its advanced contact center capabilities such as skill-based routing, load balancing, priority algorithms, and performance measurement.

Benefits of *CentreVu* Internet Solutions

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

- Additional media access types through which your customers can reach your contact center
- Quicker and more accurate response to email and fax
- Better management of email and fax
- More effective collaboration with customers

Internet sessions versus messages

Internet voice and chat, chat-only, callback, and callback and collaborate interactions are *Internet sessions* handled by the *CentreVu* Internet Solutions software.

Emails and faxes are *messages* handled by the *Message Care* software (also referred to as the messaging software).

CentreVu Internet Solutions capacities

CentreVu Internet Solutions allows agents to process any combination of the following media access types:

- Telephone callback
- Text chat
- Internet voice and chat (the maximum number of simultaneous sessions of this type depends on VoIP gateway capacity)
- Email and fax messages (using the messaging software)

Leveraging additional capacity

Additional capacity for Internet sessions can be acquired with the following:

- Multiple VoIP gateways
- Adjunct/Switch Application Interface (ASAI) Phantom Calls—enabling the use of ASAI phantom calls for text chat sessions (available with *DEFINITY* ECS 6.3 or greater) avoids using PRI resources.

Phantom calls are treated by the Automatic Call Distribution (ACD) like ordinary voice calls in that they are routed without the use of a PRI trunk. Enabling the ASAI phantom call feature increases the number of simultaneous sessions that *CentreVu* Internet Solutions can handle.

- Internet PreRoute—multiple ICMs can be controlled by a common Centralized Internet Routing Service (CIRS).

Additional messaging capacities

The following table lists the current capacities for messages:

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	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.) Fax messages Assuming a 46K fax (one page), 95,000 fax messages can be stored in a 5-GB database.
Mailboxes	150
Message retrieved per polling cycle	A maximum of 200 message retrieved per mailbox in a polling cycle
File Attachments	100 per inbound message



Key features of CentreVu Internet Solutions

Introduction In addition to the new features for Release 4.5 (New features for CentreVu Internet Solutions 4.5 (1-2)) *CentreVu* Internet Solutions provides many other significant features for your contact center. The information in this section briefly describes some of these features.

What is covered

The following features are described:

- Customer contact tools (1-10)
- Telepointer (1-11)
- Web browsing (1-11)
- Transcripts (1-12)
- Call control (1-13)
- HTML forms sharing (1-14)
- PagePop (1-14)
- Message reports (1-15)
- Arenas (1-15)
- Use of another CTI application (1-15)
- Internet Pre-Route (1-16)
- User-to-User Information (UUI) (1-16)
- Localization (1-16)
- HTTP tunneling (1-17)
- Sample Web pages (1-17)
- Encryption (1-17)
- Email message detection (1-17)
- Auto-acknowledgment (1-17)
- Message storage (1-18)
- Virtual Conference (1-18)
- Service Observing (1-18)
- Direct Agent Dialing feature (1-18)
- Web Page Guidelines (1-18)
- Reliability features (1-19)
- Voice over IP (VoIP) gateways (1-19)
- Operating systems (1-19)

Customer contact tools

CentreVu Internet Solutions provides the following methods for customers to contact agents:

- Text chat (1-10)
- Internet voice and chat (1-10)
- Callback (1-10)
- Email (1-11)
- Fax (1-11)

Text chat

Text chat enables agent and customer to send text messages to each other by means of the downloaded Agent and Caller Control Windows (*Java applets*).

This feature is useful in the following situations, among others:

- The customer is not equipped to handle Internet voice sessions.
- The customer is not comfortable giving certain information by Voice over IP.
- Voice over IP quality deteriorates during the course of the Internet session.

During a chat-only Internet session, the customer and the agent can also participate in Web-based collaboration (see Escorted browsing (1-12) for more information).

Internet voice and chat

Internet voice and chat enables a customer to speak with an agent through an Internet connection while conducting a Web-based collaboration (see Escorted browsing (1-12) for more information) and text chat.

Callback

There are four methods through which a callback can occur:

- Caller-initiated—enables a customer whose computer is not equipped for Internet voice, or who is located behind a firewall that blocks Internet voice traffic, to request that an agent call on a regular telephone line (either immediately or after a customer-specified interval). This type of callback does not include Web-based collaboration, because an Internet session is never established.
- Scheduled—enables a customer to request a telephone-only callback at a specific time, or during a specific interval.

- **Agent-initiated**—enables the agent to place a telephone call to the customer. This is useful if voice quality degrades during an Internet voice call or to add telephone-based voice to a text chat session. The agent can initiate a callback without asking for the customer's phone number (if the agent already knows it), or prompt the customer to provide a telephone number. If the customer has the ability to receive the telephone call while still on the Internet, text chat and escorted browsing continue to be available.

Agent-initiated callback is also useful for a messaging agent needing to contact a customer regarding a message. In this case, the messaging agent must know the customer's telephone number.

- **Collaborate and callback**—enables a customer who has the ability to be connected to the Internet while talking on a phone to speak over the telephone while simultaneously using the Internet-based features.

Email

Customers can reach the contact center through email (form-based and free-formatted).

Fax

Customers can reach the contact center through a fax.

Telepointer

With the telepointer feature enabled, two pointers—one local and one remote—appear in both the agent's and the customer's browser windows. Thus each party can see what the other points to on the screen (as long as monitor resolutions are the same). This feature cannot be used simultaneously with the Auto Sync feature.

Web browsing

Both the caller and the agent can browse the Web while waiting for the connection of a real-time call and/or while the real-time call is active. The real-time software provides the following three methods for agents and callers to browse the Web:

Individual browsing

During a real-time call, agent and caller can use their browsers to navigate to other Web pages.

Escorted browsing

With escorted browsing, the agent can share Web pages with a caller and vice versa. Either person can send the URL of the page currently loaded in their browser; the other's browser will load the same URL.

For real-time calls, the escorted browsing feature provides the following two ways in which the parties can share Web pages:

- The customer can use the **Send Page** button
- The agent can use the **Send** button in combination with an empty Text Entry box, or can give focus to the empty Text Entry box and then press the **Enter** key.
- Either party can type (or copy and paste) a Uniform Resource Locator (URL) into the Text Entry box 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.

Power browsing

Power browsing improves upon the escorted browsing feature by enabling agents, when necessary, to access the more advanced and powerful features on the Internet such as:

- Shopping cart applications
- Applications that rely on cookies
- Secure Socket Layer (SSL) applications
- Customized Collaboration

For information on how to implement power browsing, see the *PowerBrowsing.html* file located in the Web Page Guidelines documentation on your CVuIS ICC Software CD-ROM.

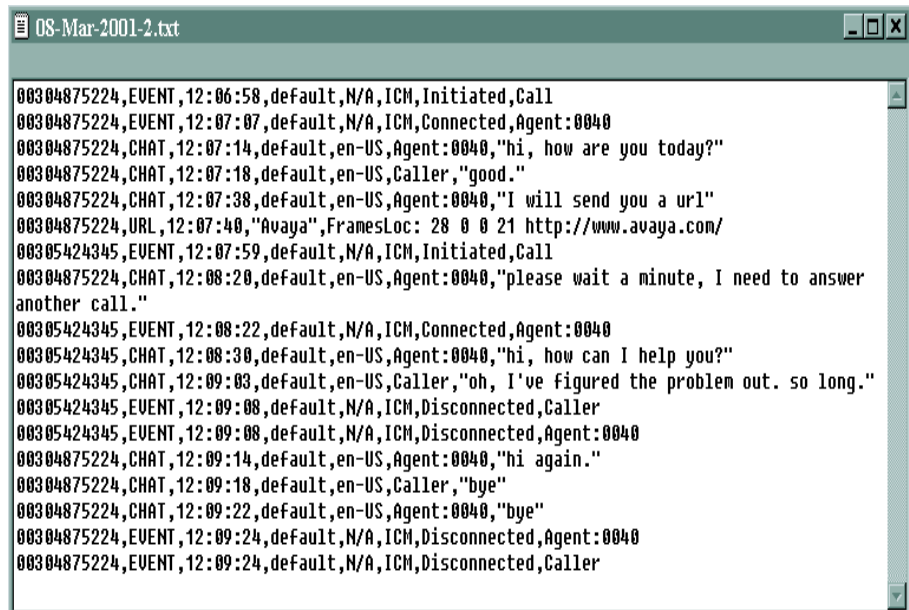
Transcripts

The transcript feature enables better customer relationship management by recording the following information about an Internet session:

- Chat—The transcript feature stores the chat interaction between agent and caller. In the event of a transfer, the chat transcript notes when the new agent takes over, and the new agent receives the chat transcript of the entire session up to that point.
- URL transcripts—The transcript feature maintains a history list of URLs shared between customer and agent during an Internet session. In the event of a transfer, the new agent receives the URL transcript of the entire session up to that point.
- Session connection information

Transcripts are stored on the ICM server to keep accurate records of the interactions between an agent and caller that occur during a chat session. The chat transcript logs are maintained, by default, in the *C:\Program Files\Avaya\icm\transcripts* directory. For more information about transcript logging, see *Transcript log files on the ICM server (12-9)*.

The following figure illustrates a transcript file:



```
00304875224,EVENT,12:06:58,default,N/A,ICM,Initiated,Call
00304875224,EVENT,12:07:07,default,N/A,ICM,Connected,Agent:0040
00304875224,CHAT,12:07:14,default,en-US,Agent:0040,"hi, how are you today?"
00304875224,CHAT,12:07:18,default,en-US,Caller,"good."
00304875224,CHAT,12:07:38,default,en-US,Agent:0040,"I will send you a url"
00304875224,URL,12:07:40,"Avaya",FramesLoc: 28 0 0 21 http://www.avaya.com/
00305424345,EVENT,12:07:59,default,N/A,ICM,Initiated,Call
00304875224,CHAT,12:08:20,default,en-US,Agent:0040,"please wait a minute, I need to answer another call."
00305424345,EVENT,12:08:22,default,N/A,ICM,Connected,Agent:0040
00305424345,CHAT,12:08:30,default,en-US,Agent:0040,"hi, how can I help you?"
00305424345,CHAT,12:09:03,default,en-US,Caller,"oh, I've figured the problem out. so long."
00305424345,EVENT,12:09:08,default,N/A,ICM,Disconnected,Caller
00305424345,EVENT,12:09:08,default,N/A,ICM,Disconnected,Agent:0040
00304875224,CHAT,12:09:14,default,en-US,Agent:0040,"hi again."
00304875224,CHAT,12:09:18,default,en-US,Caller,"bye"
00304875224,CHAT,12:09:22,default,en-US,Agent:0040,"bye"
00304875224,EVENT,12:09:24,default,N/A,ICM,Disconnected,Agent:0040
00304875224,EVENT,12:09:24,default,N/A,ICM,Disconnected,Caller
```

The items that appear in a transcript file are as follows:

1. Session ID
2. Session type (CHAT, URL, or EVENT)
3. Time stamp
4. Record body data depends on session type, as follows:
 - For CHAT type: arena, language, sender ID, chat string
 - For URL type: URL title, URL string
 - For EVENT type: data depends on event sub-type—Initiated (*call*, *callback* [plus callback digits], *meeting*, *conference*), Connected (*agent*, *caller*, *normal call*, *transfer*, *conference*, *callback*), or Disconnected (*agent*, *caller*, *joiner*)

For more information on how to implement transcripts, see the *Web Page Guidelines* documentation on your CVuIS ICC Software CD-ROM.

Call control Agents can answer Internet sessions, messages, and conventional (audio-only) telephone calls. Conventional telephone calls, as well as

Internet sessions, are delivered to the agent's phone, so the agent answers all calls and Internet sessions using a single headset or handset.

Internet session control

- End session—both the agent and the customer have the ability to end an Internet session.
- Transfer—the agent can transfer an Internet session to another agent.
- Conference—the agent can add additional agents, and non-agent collaborators, to an Internet session.

Message control

The messaging software provides specific functionality that agents can use to process email and fax messages.

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 customer and agent to interactively complete HTML forms. Multiple HTML forms on the same Web page can be shared. For more information about HTML forms sharing, see [HTML forms sharing \(8-23\)](#).

PagePop

The PagePop feature provides Web-based information throughout session setup. This Web-based information can be provided for the customer and the agent depending on the media access method the customer uses. See

Internet session PagePop

During the setup of an Internet voice call, text chat call, or callback call, the customer may browse the Internet while awaiting connection with an agent. PagePop can provide the customer with updates on the connection process and return the browser to an administered Web page when the agent connects.

The content of the Web page presented to an agent when a session connects is administrable by the contact center. This may include the Web page that the customer called from, information entered by the customer, or perhaps information extracted from a database based on customer identification. PagePops can also be administered by arena. See [Administer PagePops for Internet sessions \(6-18\)](#) for information on administering Internet session PagePops.

Messaging PagePop

For a message, the PagePop feature automatically displays Web pages based on certain events (for example, when a message is received by an agent, the agent's browser displays the "New Message Display" Web page). See *Administer PagePops for messages (6-79)* for more information on messaging PagePops.

Message reports

The following methods for collecting message data are available:

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

For more information, see *Message reports (10-6)*.

Arenas

Arenas are a simple but powerful method for modifying Java applets (agent and caller) and Web pages for different purposes. The Arena concept gives a contact center the flexibility to do the following:

- A contact center may be a service provider for other companies' Web sites.
- A single contact center may process calls for several families of products or services.
- A single contact center may provide services for customers around the world who speak many different languages.

Each company, product, service, or language for which a contact center is managing Internet sessions can be thought of as an arena.

For more information about arenas, see *Administer arenas (6-11)* and the *Web Page Guidelines* documentation on the CVuIS ICC Software CD-ROM.

Use of another CTI application

CentreVu Internet Solutions supports the use of another Computer Telephony Integration (CTI) application to log in to the *DEFINITY* ECS. Refer to *Appendix B, Using another CTI application* for additional information.

Internet Pre-Route The Internet Pre-Route feature enables your contact center to route Internet sessions to one of several ICM servers before they enter the *DEFINITY* ECS. With this capability, incoming sessions 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. Resource routing is accomplished through a Centralized Internet Routing Service (CIRS). For more information, see Appendix A, Internet Pre-Route configuration.

User-to-User Information (UUI) In addition to passing customer information to Web-based applications using URL-encoded parameters, real-time communications 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. See UUI through ASAI (2-4) for information about using UUI with IP gateways other than the ITG.

Localization *CentreVu* Internet Solutions supports localization, or translations for multiple languages, and provides the resource files needed to support those languages. Supported languages are:

- US English (en-US)
- Colombian Spanish (es-CO)
- Brazilian Portuguese (pt-BT)
- Italian (it)
- French (fr)
- German (de)
- Traditional Chinese (zh-TW) (realtime only; messaging not supported)
- Simplified Chinese (zh) (realtime only; messaging not supported)
- Japanese (ja)
- Korean (ko)

Your contact center can support other languages for Internet sessions by creating the necessary resource files. See Select another language (6-21) for procedures on administering a language to use with Internet sessions. See Add a new language (6-27) to add a non-provided language to your system.

HTTP tunneling HTTP Tunneling allows customers behind firewalls to reach your contact center without altering the administration of their firewalls. This extends the reach of the contact 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 Avaya Helpline number: 1-800-242-2121.

The HTTP Tunnel Timeout feature allows you to enter the number of seconds the real-time software will try to connect the caller applet through the TCP port (8102) before attempting to use HTTP tunneling. For more information, see *Administer arenas* (6-11).

Sample Web pages *CentreVu* Internet Solutions includes a number of sample Web pages that you can customize to fit your contact center's needs. For example, a sample Web page is provided that includes Canned Phrases which enables agents to quickly send text without having to type, and Agent Scripting which 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*

For procedures on how to implement optional features to customize your Internet contact center, see the *Web Guidelines* documentation located on your CVuIS ICC Software CD-ROM.

Encryption The following Internet session information to and from the Agent and Caller applets are 128-bit encrypted:

- Text chat
- URLs and HTML form data sent during escorted browsing
- Displayed messages
- Other application control messages not visible to the agent or customer

NOTE: Internet telephony (voice) is not encrypted.

Email message detection The messaging software provides email message detection in the Post Office Protocol (POP3)-compliant mailboxes of your designation.

Auto-acknowledgment The messaging software provides auto-acknowledgment for incoming email messages. See *Considerations for specifying auto-acknowledgment text* (2-50) for more information about auto-acknowledgments.

Message storage	Messages can be stored in an Open Database Connectivity (ODBC)-compliant database (such as <i>Microsoft SQL-Server 7</i> and <i>SQL-Server 2000</i>).
Virtual Conference	Virtual Conference allows Web-based customers to join a conference that is hosted by a presenter. With such a conference, a presenter pushes Web pages to all the participants' browsers. Features such as text chat and Auto Sync are also available.
Service Observing	Service Observing allows a supervisor to observe an Internet session much like a supervisor would observe a regular telephone call. To observe a session, the supervisor must log in using the same skills as the agent. The supervisor (service observer) appears as a conferee on the Internet session and can observe all chat, Web pushes, and other session events. See <i>Service Observing (6-57)</i> for information on setting up the Service Observing feature.
Direct Agent Dialing feature	Direct Agent Dialing allows a customer to direct their Internet session to a specific agent. There are many cases where a customer may want to speak to a specific agent; one such instance may be to continue communicating with an agent concerning an ongoing problem. To use Direct Agent Dialing, a customer must know the ID of the agent. On the "Contact Us" Web page, the customer enters the agent's ID and the Internet session is directed to the agent associated with the ID. For information on how to implement Direct Agent Dialing, contact the Avaya Customer Care Center at 800-242-2121.
Web Page Guidelines	The Web Page Guidelines are Web-based documentation providing information and working examples for designing, creating, modifying, or enhancing Web pages to work in conjunction with <i>CentreVu</i> Internet Solutions. Some of the examples provided in the Web Page Guidelines documentation are: • How to set up your Web site • How to customize your agent applet • How to enhance your Web pages using features such as Canned Phrases, Agent Guides, power browsing, and Telepointer.

Please refer to the Web Guidelines documentation to learn about the Web page enhancements and features you can incorporate into *CentreVu* Internet Solutions. During product installation you will be given the opportunity to install this documentation. If you do not wish to install it, you can refer to it directly from the CVuIS ICC Software CD-ROM at a later time.

Reliability features

The following features are provided to enhance the reliability of the *CentreVu* Internet Solutions system:

- **Auto-reconnect**—specifies to automatically reconnect the ICM server and the agent applet when *CentreVu* Internet Solutions loses connection. See Chapter 6, *Administration* for information on administering the auto-reconnect feature.
- **ICM and CTI debug**—maintains debug state across ICM server reboots.

Voice over IP (VoIP) gateways

The Internet Telephony Gateway (ITG) is no longer available as a VoIP gateway for new *CentreVu* Internet Solutions installations, though Avaya still supports existing installations. There are two other types of gateways available:

- **Avaya IP600 Internet Communications Server**—connects to your contact center's *DEFINITY* ECS by either ISDN-PRI or IP.
- ***DEFINITY* IP Solutions**—uses the built-in networking capabilities of your contact center's *DEFINITY* ECS.

For more information, see *Administering the Voice over IP Gateways* (6-33).

Operating systems

CentreVu Internet Solutions supports servers with the following operating systems:

- **Windows NT**—you can install the software on a *Windows NT* server
- **Windows 2000**—you can install the software on a *Windows 2000* server
- **Solaris versions 7 and 8**—you can install the software on a *Solaris* 7 or 8 operating environment.



What do you need to make CentreVu Internet Solutions work?

Overview *CentreVu* Internet Solutions provides several media access types to connect your contact center with the Internet. The media access types your contact center purchases determines the *CentreVu* Internet Solutions hardware and software required. The information in this section is based on the *CentreVu* Internet Solutions standard configuration. For information about the standard configuration, see Standard configuration (3-3).

Complete details for each hardware and software component required for *CentreVu* Internet Solutions can be found in Chapter 2, Prepare your contact center for CentreVu Internet Solutions.

NOTE: The following are minimum specifications. Running *CentreVu* Internet Solutions concurrently with other applications may require additional hardware capabilities.

NOTE: *CentreVu* Internet Solutions includes software developed by the Apache Software Foundation (<http://www.apache.org/>).

Required Avaya software and hardware

The following list summarizes the versions of Avaya-provided hardware and software required to create a contact center that exercises all media access types. Your unique configuration will determine exactly what hardware and software components you need.

- VoIP gateway *CentreVu* Internet Solutions supports the following VoIP gateways (required if your contact center will use the Internet voice media type):
 - Internet Telephony Gateway (ITG) Release 4.01. The ITG is used only in existing installations (prior to December 4, 2000).
 - Avaya IP600 Internet Protocol Communications Server
 - *DEFINITY* IP Solutions
- *DEFINITY* ECS Generic 3 Release 6.3 or greater with the following features:
 - ASAI
 - LAN Gateway or MAPD with LAN Gateway software
 - Expert Agent Selection (EAS)
 - PRI trunking (if connecting to a VoIP gateway through ISDN-PRI)

- Internet Call Manager (ICM) software Release 4.5
- *CentreVu* Computer-Telephony for *Windows NT* software (*CentreVu CT*) Release 3.10 Version 3.0 or greater
- *Message Care* software (messaging component of *CentreVu* Internet Solutions) Release 4.5
- *CentreVu* Call Management System (CMS) and *CentreVu* Supervisor *CentreVu* CMS must be on a *Sun* platform which is LAN-connected
- Avaya Web Voice Client (WVC) as the customer-side VoIP client in place of *Microsoft NetMeeting* (your contact center determines which voice client to use; both are supported by *CentreVu* Internet Solutions release 4.5, but a given contact center can only use one or the other).
- Avaya Voice Media Manager (VMM)—if your contact center uses the WVC, then you must also install the Avaya Voice Media Manager (VMM). The VMM can reside on the ICM server or on a standalone server (it *must* run on a standalone server if your contact center handles over 400 simultaneous Internet voice sessions). Should you install the VMM on a standalone server, follow the same hardware requirements as those for the ICM server.
- Tomcat 3.2 (distributed on the CVuIS ICC Software CD-ROM at no additional cost to you). You can also use Allaire JRun Versions 2.3.3, 3.0, or 3.01; however, you must purchase JRun separately from Allaire. JRun will not be supported in the next release of *CentreVu* Internet Solutions.
- For remote diagnostic access, *pcANYWHERE* Release 8 or greater

**Required non-Avaya
software and hardware**

The following summarizes the versions of additional hardware and software that are required but not provided by Avaya. Your unique configuration will determine exactly what hardware and software components you need.

The following software and hardware is discussed:

- SQL-Server software (1-22)
- Agent desktop requirements (1-22)
- Customer desktop requirements (for real-time calls only) (1-22)
- ICM server (1-23)
- *CentreVu CT*, *Message Care*, and Agent Router server (1-24)
- Voice Media Manager (VMM) server (1-24)

SQL-Server software

For the messaging software, you need SQL-Server 7.0 with Service Pack 1 or SQL-Server 2000.

Agent desktop requirements

The Agent desktop requirements are as follows:

- PC with minimum 166 MHz Pentium II processor, 32 MB of RAM, and Network Interface Card (NIC), or a Sun workstation
- An operating system *Windows* 95, 98, 98ME, NT 4.0 (with Service Pack 5 or greater), or 2000 for PC. *Solaris* 7 or 8 for a Sun workstation.
- An Internet browser with *Java* and JavaScript enabled—either *Microsoft* Internet Explorer 5.0 or greater or *Netscape Navigator* 4.06 or greater (except 6.0)
- Fax viewing software
- Virus checking software

Customer desktop requirements (for real-time calls only)

NOTE: *CentreVu* Internet Solutions will not initiate a collaboration for customers using the *Netscape Navigator* 6.0 browser.

In order to take advantage of the Callback and collaborate feature, a customer must have the ability to receive a telephone call while remaining connected to the Internet. This ability could come in several forms, such as two telephone lines or one telephone line combined with a dedicated network connection.

Customers who do not wish to take advantage of Voice over IP require the following:

- Any computer platform capable of running a supported browser (including *Mac OS* 7.1 or above, *Red Hat Linux* 6.0 or 6.1, and *Solaris*).
- A supported Internet browser with *Java* enabled—either *American Online* (AOL) 4.0 or greater, *Microsoft* Internet Explorer 4.0 or greater, or *Netscape Navigator* 4.06 or greater (except 6.0)
- Internet connection with minimum 14.4 Kbps speed.

Customers who wish to take advantage of Voice over IP require the following:

- A PC with Intel Pentium-class processor, speakers, and sound card.
- A *Windows* operating system—either *Windows* 95, 98, 98ME, NT 4.0 (with Service pack 5 or greater), or 2000
- A supported Internet browser with *Java* enabled—either *America Online* (AOL) 4.0 or greater, *Microsoft* Internet Explorer 4.0 or greater, or *Netscape Navigator* 4.06 or greater (except 6.0)
- Internet connection with minimum 28.8 Kbps speed.
- A customer-side voice client—Avaya Web Voice Client or *Microsoft* NetMeeting 2.0 or greater (available from <http://www.microsoft.com/netmeeting>), depending upon which your contact center uses

Mail server for messaging

The mail server must be 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.

ICM server

The ICM server software runs on either a PC or Sun configuration. See the following table for the minimum requirements:

PC Configuration	Sun Configuration
450 MHz <i>Pentium</i> II-based PC with at least 128MB of RAM, a CD-ROM drive, and a Network Interface Card	Sun Ultra 5 with 128MB of RAM and equipped with a CD-ROM drive and a NIC
<i>Windows NT</i> 4.0 (with NTFS file system) with service pack 5 or greater, <i>Windows 2000</i> , or <i>Windows 2000 Advanced server</i> operating system	Solaris 7 or 8 operating system
<i>Microsoft</i> Internet Information Server (IIS) 4.0 (with option pack 4) or greater	Jserve 1.1.2 servlet engine

PC Configuration	Sun Configuration
A servlet engine—either Tomcat 3.2 (distributed on the CVuIS ICC Software CD-ROM) or Allaire JRun Versions 2.3.3, 3.0, 3.01 (must be purchased separately; being phased out with the next release of <i>CentreVu</i> Internet Solutions)	Optional certificate for secure server option (SSL)
Optional certificate for secure server option (SSL).	

***CentreVu* CT, *Message Care*, and Agent Router server**

Requirements for the *CentreVu* CT, *Message Care*, and Agent Router server are as follows:

- 450 MHz *Pentium* II-based PC with at least 256MB of RAM, a CD-ROM drive, and two Network Interface Cards
- *Windows NT* 4.0 (with Service Pack 5) or *Windows 2000* operating system with NTFS file system and *Microsoft* Internet Information Services (IIS) Version 4 (with Option Pack 4) or greater.

Important! The messaging software and the Agent Router process can reside on the same server as the ICM software.

Do not install Active Desktop on the server on which *Message Care* will reside.

Voice Media Manager (VMM) server

The Voice Media Manager (VMM) server acts as the H.323 proxy for the Avaya Web Voice Client (WVC), keeping the size of the WVC installed on the customer's PC to a minimum. If your contact center uses *Microsoft NetMeeting* for the customer's voice client, you do not need to install VMM.

When handling fewer than 400 simultaneous VoIP Internet sessions, the VMM server may be configured to run coresident on the ICM Server, either in a PC or Sun configuration, which meets or exceeds minimum ICM configuration requirements.

When handling over 400 simultaneous VoIP Internet sessions, the VMM must be configured to run on a separate server, either PC or Sun, which meets or exceeds the minimum VMM configuration requirements.

Minimum VMM PC configuration requirements are:

- Pentium II (class) processor (450 MHz) with 128MB of RAM and equipped with a CD-ROM drive and NIC
- A supported operating system
 - Microsoft Windows NT 4.0 with Service Pack 5 or greater
 - Microsoft Windows 2000 Server
 - Microsoft Windows 2000 Advanced Server

Minimum VMM Sun configuration requirements are:

- Sun Ultra 5 with 128MB of RAM and equipped with a CD-ROM drive and NIC
- A supported operating system
 - Solaris 7
 - Solaris 8



What is localized?

Overview Localization refers to the adaptation of a product to reflect the cultural differences of a target locale/market. *CentreVu* Internet Solutions directly supports the following languages:

- US English (en-US)
- German (de)
- French (fr)
- Colombian Spanish (es-CO)
- Brazilian Portuguese (pt-BT)
- Italian (it)
- Japanese (ja)
- Korean (ko)
- Simplified Chinese (zh)—supported by the Internet session software only
- Traditional Chinese (zh-TW)—supported by the Internet session software only

You can easily add different languages by following the procedures located in *Add a new language* (6-27).

Real-time support for Japanese, Korean, and Chinese

To support Japanese, Korean, and Chinese for Internet sessions, you must ensure the following:

- The ICM server must be running the correct version of a supported operating system that supports the fonts for the language.
- Agents, customers, supervisors, and administrators using one of these three languages must run the 4.0 or greater version of *Microsoft* Internet Explorer that supports the fonts for the language. Language-compatible versions of *Netscape Navigator* and other versions of *Microsoft* Internet Explorer are *not* supported.
- The agent's workstation and the customer's workstation must have an operating system in one of these languages.

- Non-Japanese, non-Korean, or non-Chinese customers can communicate with a Japanese, Korean, or Chinese *CentreVu* Internet Solutions contact center even though the customer's workstation cannot display the characters. In this situation, communication takes place in another language.

The real-time component provides sample Web pages and scripts translated into the supported languages. You can locate these files in the `\icm\demos\icc\{language-code}` folders on the ICM server.

Messaging support for Japanese

The messaging software 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.

To support Japanese for message calls, you must ensure the following:

- The messaging server must be running the Japanese version of *Windows NT* to support Japanese fonts.
- Agents wanting to use Japanese must run the 4.0 or 5.0 Japanese versions of *Microsoft* Internet Explorer or the 4.06 or 4.60 Japanese versions of *Netscape Navigator*.
- The agent's workstation can be a Japanese or an English operating system. If the agent uses an English workstation while the messaging software is in Japanese, 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 applet and caller applet
- Most user-visible messages between the ICM Server and applets
- Real-time sample Web pages
- The following messaging 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). The messaging component 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.
- Agent messaging Web page error messages
- Report selection options for messaging (for example, report names and time parameters)
- The messaging software supports displaying the text component of a received email message in one of the supported languages or in an ISO-88591 language. For example, the messaging software 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:

- Installation
- VoIP gateway setup, administration screens, and error messages
- Administration error messages for the messaging software
- *CentreVu* Computer-Telephony server error messages
- Text-based *CentreVu* CMS reports for real-time data
- Text displayed in the Text Chat box on the agent applet and caller applet. 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 in which the agent will see the message.
- Message labels such as "TRK #," "RE," and "FWD"
- Administration Web pages for messaging
- The messaging software supports spell checking for US English only.



Where can I get CentreVu Internet Solutions assistance?

Offer assistance

The Helpline phone number for all Avaya products is 1-800-242-2121. Call this number for help with *CentreVu* Internet Solutions. The Avaya support Web page is <http://www.avaya.com/support>. Be prepared to identify the *CentreVu* Internet Solutions component you are calling about (for example, the messaging 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 Solutions training considerations**

The following two methods of training are available for *CentreVu* Internet Solutions:

- Training course guides
- Onsite instructor-led training

Training course guides

Course guides can be used for self-paced training, in instructor-led classes, and as on-the-job references. The agent course guide provides step-by-step instructions on how to process Internet sessions and messages. The administration course guide provides an overview of how to administer *CentreVu* Internet Solutions.

Onsite instructor-led training

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

Other training available

Training in a classroom, on a CD-ROM, or in video format is available from Avaya's documentation and training development organization, Avaya University, for all aspects of contact center operations. *CentreVu* Internet Solutions is included as part of standard contact center training.

For more information, contact Avaya University at 1-800-255-8988.

Optional professional services

Avaya provides various professional services offerings to assist with *CentreVu* Internet Solutions. Avaya has highly trained and experienced personnel and specialized resources ready to work for you. If you are interested in the offers below, or want to inquire about other services, contact 18004NetCare for details. These offers include the following:

Network Integration Services

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

Call Center Application Integration Services

This offer provides an experienced Avaya Call Center consultant to evaluate a contact center and engineer its optimum configuration.

Contact Center Tune-Ups

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

Firewall offers

This offer provides the Avaya 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 Avaya Advanced Data Networking Group that can engineer and provision industry-leading solutions from Avaya and other industry-leading data equipment providers. Solutions are maintained and monitored by Avaya Professional Services, the oldest and largest network management service in the industry. Avaya's data networking solutions provide solid, highly available infrastructures on which to base business applications.



2 Prepare your contact center for CentreVu Internet Solutions

Overview

- Purpose** This section explains how to prepare your contact center so that you can integrate *CentreVu* Internet Solutions 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 *CentreVu* Internet Solutions. This includes Avaya's Technical Support organizations.
- Contents** The following information is described:
- Customer and agent interface for Internet sessions (2-6)
 - User-to-User Information (UUI) (2-3)
 - Security (2-10)
 - Firewall guidelines (2-17)
 - Design considerations for messaging (2-28)

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

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



User-to-User Information (UUI)

Overview

Purpose The purpose of this section is to explain how to use the UUI feature when you are using a Voice over IP (VoIP) gateway other than the Internet Telephony Gateway (ITG).



UUI through ASAI

Introduction In *CentreVu* Internet Solutions configurations where an ITG is used for VoIP, the system sends UUI (User-to-User) information as part of the SETUP message from the ITG to the *DEFINITY* ECS.

With *CentreVu* Internet Solutions configurations that use VoIP gateways other than the ITG, the system passes UUI information to the *DEFINITY* ECS using the *DEFINITY* ECS Adjunct/Switch Applications Interface (ASAI) Adjunct Routing feature. In *CentreVu* Internet Solutions, the CTI software acts as the Adjunct Router. When a VoIP session is initiated, the CTI attaches UUI information to the VoIP session, and then redirects the VoIP session to the new destination based on the ASAI digits associated with the VoIP session.

UUI through ASAI setup example To use UUI through ASAI, you must add parameters to your customer Web page and create a vector on the *DEFINITY* ECS. The setup examples are based on the following information:

Table 2-1 Setup example information

Value	Description
UUI="uuid123"	This is the UUI ID.
VDN=2000	This VDN contains the adjunct route step.
VDN=3000	The CTI will route the call to this VDN.
ASAI=1	This is the Adjunct Link between the CTI and the <i>DEFINITY</i> ECS.

Customer Web page

Based on the "Setup example information" table, the customer Web page would have to contain the following parameters and values:

```
<input type=radio name="type"
value="voice"checkedonClick="form1.vdn_ext.value='2000'">
Internet Voice and Chat
<input type=hidden name="asai" value="3000">
<input type=hidden name="uui_data" value="uuid123">
```

For more information about Web pages, see the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM.

DEFINITY ECS Vector example

Based on the "Setup example information" table, your vector would look like the following:

Table 2-2 Vector steps for VDN 2000

Vector Step	Description
1. Goto adjunct route link 1	This step routes the VoIP session to the CTI.
2. Wait time 60 seconds hearing silence	This step give the CTI 60 seconds to reroute the VoIP session.
3. Stop	



Customer and agent interface for Internet sessions

Overview

Purpose The purpose of this section is to provide you with information on how to prepare your customer and agent Web pages to work in conjunction with *CentreVu* Internet Solutions.

Contents This section provides information about the following:

- Customer Web page (2-7)
- Agent login Web page (2-8)
- Agent and customer applets (2-9)



Customer Web page

Introduction

Customers can access a contact center agent from the customer Web page by requesting a voice and chat (Internet voice), chat only (text chat), callback only (customer-initiated callback), callback and collaborate session, or scheduled callback.

The customer Web page must contain a form which collects customer information that is passed to the *Java Servlet*: For example,

```
<form name="form1"action="http://{icm_server_name}/servlet/WT/callersu"method="post">
```

Customer Web pages may provide a mechanism, such as radio buttons, to select an access method or preferred language; a form in which the customer can enter such items as name or account number; instructions on accessing the Web-enabled contact center; a table in which a customer can schedule a callback; and other relevant information or controls.

Sample customer Web pages

CentreVu Internet Solutions provides a sample customer Web page (the "Call Us" Web page) that contains the required parameters and some optional parameters that will allow a customer to contact an agent. You can use the sample customer Web page as it is or you can modify it to meet your specific needs. The remainder of this section includes information about the required and optional parameters for a customer Web page. The sample customer Web page is located in `\icm\demos\icc\icc_caller.html`.

Additional information about customer Web pages

For more information about customer Web pages and for optional and required customer Web page parameters, see the *Web Page Guidelines* documentation on your CVuIS ICC Software CD-ROM.



Agent login Web page

Introduction Along with providing entrance into *CentreVu* Internet Solutions application, the agent login Web page provides important information (through a form) such as agent ID and phone extension that is passed to the *Java* servlet: `http://{icm_server_name}/servlet/WT/agentsu`

The information passed to the *Java* Servlet causes the Agent Control Window (applet) to be downloaded to the agent's desktop and a Web page to be loaded in the agent's browser. At this time, the agent is ready to take Internet sessions.

Sample agent login Web pages *CentreVu* Internet Solutions provides a sample Agent Login Web page that contains the required parameters and some optional parameters that will allow an agent to accept Internet sessions from customers. You can use this sample Agent Login Web page as it is or you can modify it to meet your agent needs.

Additional information about agent login Web pages For more information about agent login Web pages and for optional and required agent Web page parameters, see the Web Page Guidelines documentation on your CVuIS ICC Software CD-ROM.



Agent and customer applets

Introduction When a customer initiates an Internet session (that is, attempts to make contact with an agent over the Internet), the real-time software downloads an applet to the customer's desktop. The customer applet is called the Caller Control Window. When an agent logs in to the real-time software, it downloads an applet to the agent's desktop called the Agent Control Window. The applets provide the interface and functionality to enable customers and agents to communicate.

Modifying the applets The real-time software provides an Agent Control Window and a Caller Control Window that you can use immediately to begin accepting Internet sessions. However, it is more likely that you would want to modify these applets to better fit your particular needs. The real-time software has provided the ability for you to modify these applets. For detailed information on how to modify the applets, see the Web Page Guidelines on your CVuIS ICC Software CD-ROM.

Preparing for multiple simultaneous Internet sessions A real-time agent can conduct multiple sessions simultaneously. See Chapter 8, How to process Internet sessions for a description of the multi-session agent interface.

To implement the multi-session feature, you must do the following:

- Set the Multiple Call Handling feature in the *DEFINITY* ECS (Multiple Call Handling for a multi-session environment (6-52)).
- Change the agent login Web page to use the `<form>` tag with the action property that references the WT Java servlet, using the `msagentsu` parameter. The `msagentsu` parameter indicates a multi-session agent interface.

```
<form action="/servlet/WT/msagentsu" method="post">
```

Additional information about the multi-session interface

For information on how to implement the multi-session interface with an existing installation of *CentreVu* Internet Solutions, see the Web Page Guidelines on your CVuIS ICC Software CD-ROM.



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 (2-11)
- Messaging reports (2-12)
- Administration Web page security (2-13)
- VoIP gateway security (2-14)
- ICM server security (2-15)
- Message Care, CentreVu-CT, and Agent Router server security (2-16)



Message privacy

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

- Message database
- Mailboxes
- Agent Web pages

Secure the message database

Messages in the message storage system are accessible only through Web pages or direct access to the *Microsoft* SQL-Server database which stores message information. Only agents currently logged in to the messaging software can retrieve messages through the Web pages provided by the messaging 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.

Secure 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.

Secure 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.



Messaging reports

Secure message reports

The messaging 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 messaging database and messaging 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 (2-13) section that follows.



Administration Web page security

Secure administration Web pages

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 *CentreVu* Internet Solutions administration Web pages, you must ensure the following:

- All *CentreVu* Internet Solutions directories must be installed on an NT File System (NTFS).
- The following default directory on the *Message Care* server is password protected:
C:\Program Files\Message Care\www\admin
- The *C:\Program Files\Avaya\icm\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 *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* Internet Explorer 2.0 or greater.

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



VoIP gateway security

ITG security The ITG connects to the contact center's *DEFINITY* ECS by an ISDN-PRI trunk. This provides a buffer between your network's Demilitarized Zone (DMZ) and the contact center's *DEFINITY* ECS because voice data arrives from the Internet in (TCP/IP) packets and is transformed into ISDN-PRI data by the ITG before reaching the switch. The ITG itself requires a direct-dialed analog line for the Remote Maintenance Board (RMB). This connection allows the ITG to place alarm calls to the Avaya 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 an Avaya 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.

***DEFINITY* IP Solutions security** The *DEFINITY* IP Solutions gateway requires a direct link from the contact center's *DEFINITY* ECS to the network's Demilitarized Zone (DMZ). Because it is TCP/IP-based, the gateway does not perform a protocol conversion of Internet voice packets before passing them into the *DEFINITY* ECS. Therefore, when using the *DEFINITY* IP Solutions gateway, your contact center should take standard precautions against unauthorized access from the DMZ.

Avaya IP600 security The Avaya IP600 can connect to the contact center's *DEFINITY* ECS by either an ISDN-PRI trunk (see the section on ITG security for details) or by TCP/IP (see the section on *DEFINITY* IP Solutions security for details).



ICM server security

Secure the ICM server

The server on which the ICM software resides requires direct-dialed analog lines. The *pcANYWHERE* software and a modem are used to provide remote maintenance, diagnostics, and support for the ICM 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, the *pcANYWHERE* software should be, at a minimum, password protected. Please consult the *pcANYWHERE* documentation for additional security recommendations.

You may also want to turn off or disconnect the dial-in modem, and stop the *pcANYWHERE* services when you do not require remote access.



Message Care, CentreVu-CT, and Agent Router server security

What needs to be secured?

The server on which the *Message Care*, *CentreVu-CT*, and Agent Router software resides requires direct-dialed analog lines for remote diagnostic and maintenance support. This remote support is used for all components of the messaging software. *pcANYWHERE* software and a modem are used to provide remote maintenance, diagnostics, and support for messaging. The *pcANYWHERE* software is very important for the maintenance and support of the *Message Care*, *CentreVu-CT*, Agent Router server. It does, however, offer an access point into your server and, possibly, into your network. Therefore, you should turn off or disconnect the dial-in modem, and stop the *pcANYWHERE* services when you do not require remote access.

Install a virus checker such as *McAfee VirusScan* 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 *CentreVu* Internet Solutions.

Contents The following information is described:

- Firewall security for messaging (2-18)
- Firewall security for the real-time system (2-19)
- Ports and protocols (2-20)
- Data communication detail (2-24)



Firewall security for messaging

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. You have probably already designed your firewall to allow appropriate email to pass in and out of your contact center, so the messaging software poses no additional security risk to your LAN.



Firewall security for the real-time system

Firewall administration

Firewall administration for the real-time system varies from customer to customer. You must understand the ports and protocols that are used by the real-time software 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. 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 real-time software offers the option of providing “keep-alive” packets between the agent PC and the ICM server. “Keep-alive” packets may be required to avoid firewall timeouts. This option is enabled by Avaya support personnel as necessary. If you have a problem with timeouts, contact the Helpline at 1-800-242-2121 to open a trouble ticket.



Ports and protocols

Purpose This section provides common ports and protocols used to administer minimum firewall requirements for the real-time components.

The following table lists common ports and protocols:

Table 2-3 Common 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 AgentRouter	TCP	AgentRouter communication
8103 AgentRouter	>1023 ICM server	TCP	AgentRouter communication
Note: >1023 ports are dynamically assigned.			

The following table lists *CentreVu* Internet Solutions ports and protocols:

Table 2-4 CentreVu Internet Solutions ports and protocols

Source	Destination	Protocol	Purpose
>1023 AgentRouter	450 T-server	TCP	Call Control
450 T-server	>1023 AgentRouter	TCP	Call Control
>1023 AgentRouter	>1023 T-server	TCP	CTI communication
>1023 T-server	>1023 AgentRouter	TCP	CTI communication
>1023 Internet	8001 CMS	TCP	Page hit counts CMS
8001 CMS	>1023 Internet	TCP	Response to browser from CMS
>1023 ICM server	8106 CIRS server	TCP	CIRS Communication
8106 CIRS server	>1023 ICM server	TCP	CIRS Communication
>1023 ICM server	80 CMS	TCP	Event data
80 CMS	>1023 ICM server	TCP	Response to above
Note: >1023 ports are dynamically assigned.			

If you are currently using the ITG, then the following table lists VoIP ports and protocols for the ITG:

Table 2-5 VoIP ports and protocols for the ITG

Source	Destination	Protocol	Purpose
>1023 ICM server	8103 ITG	TCP	ICM/ITG communication
8103 ITG	>1023 ICM server	TCP	ICM/ITG 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
Note: >1023 ports are dynamically assigned.			

The following table lists VoIP ports and protocols using the *DEFINITY* IP Solutions:

Table 2-6 VoIP ports and protocols for DEFINITY IP Solutions

Source	Destination	Protocol	Purpose
>1023 Internet	1720 C-LAN**	TCP	NetMeeting H.323 Call Setup
1720 C-LAN**	>1023 Internet	TCP	Response to above
>1023 Internet	*IP Media Processor	UDP	G.723.1 Voice
*IP Media Processor	>1023 Internet	UDP	G.723.1 Voice
* It is necessary to administer a range of UDP ports on the <i>DEFINITY</i> ECS when using the IP Media Processor. Use this same port range when administering the firewall for VoIP.			
** 1720 is the default value, and the only value usable by <i>Microsoft NetMeeting</i> . The Avaya WVC can use 1720 or any value above 5000.			



Data communication detail

Purpose The following section details the communications between the real-time software. 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 pages and should be helpful when developing firewall rules.

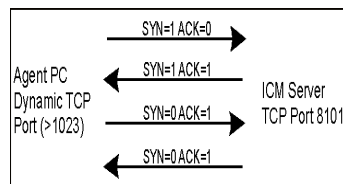
Agent PC to ICM server data communications

Agent PCs need to communicate with 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 real-time 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* 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 forth. The only other data communication taking place from the agent's PC during a real-time call is Internet browsing.



Customer communications

When a customer initiates a session to an Internet contact center, the real-time system downloads a Caller Control Window to the customer's desktop from the ICM server using 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 customer communicates with the ICM server (and the VoIP gateway if voice is used), never directly with an agent computer. Once an agent is connected to the customer, 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 customer to TCP port 8102 on the ICM server).

Internet voice sessions

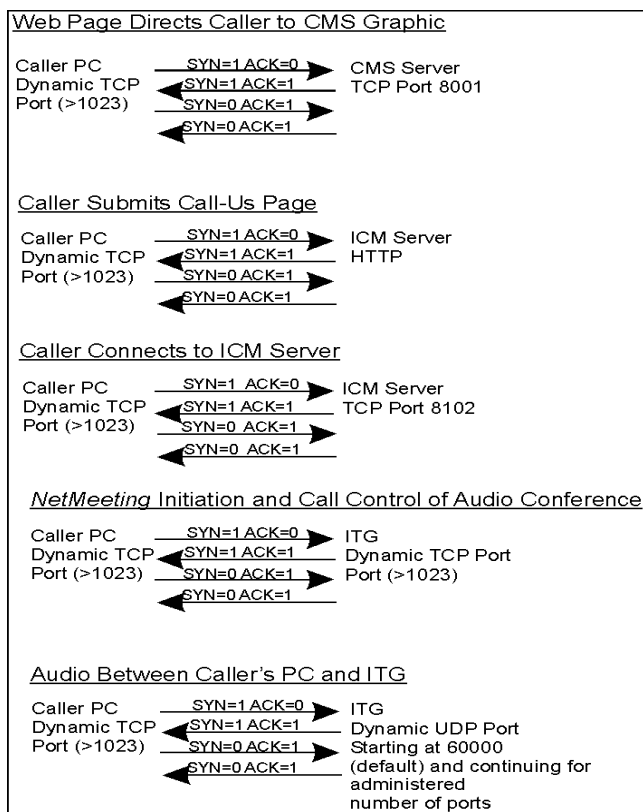
Internet voice sessions use either *Microsoft NetMeeting* (installed on the customer's desktop) or the Avaya Web Voice Client (WVC) (consisting of a small applet installed on the customer's desktop and the Voice Media Manager software residing on a server in the contact center) to set up a conference with the VoIP gateway. Each of the voice clients has specific data communications requirements:

- *NetMeeting* requires dynamic TCP ports for setup and control, and dynamic User Datagram Protocol (UDP) ports to carry the voice. The customer must be able to get TCP and UDP traffic to the gateway. Internet voice is carried from the VoIP gateway starting at UDP port 60000 (administrable) and continuing upward. The gateway must be able to respond to the customer's dynamic TCP ports for *NetMeeting* setup and to the customer's dynamic UDP port for voice.
- WVC requires dynamic TCP ports for setup and control. The contact center can administer the range of UDP ports over which the WVC carries the audio stream by changing the "Maximum UDP port" and "Minimum UDP port" fields on the Administer VoIP Parameters page (for more information, see Administer VoIP Parameters (6-31)).

Summary

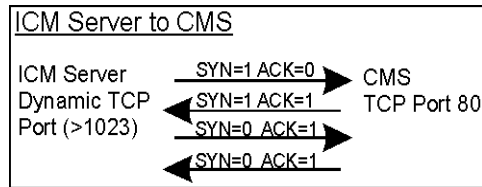
The firewall must allow Internet sources to reach the ICM server on TCP port 8102, and the ICM server must be able to respond to that dynamic (>1023) TCP port. The firewall must allow Internet sources to reach the gateway on dynamic (>1023) TCP ports and on UDP ports 60000 or higher (or whatever is administered in the gateway if the default is not used), and the gateway 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 a real-time call:

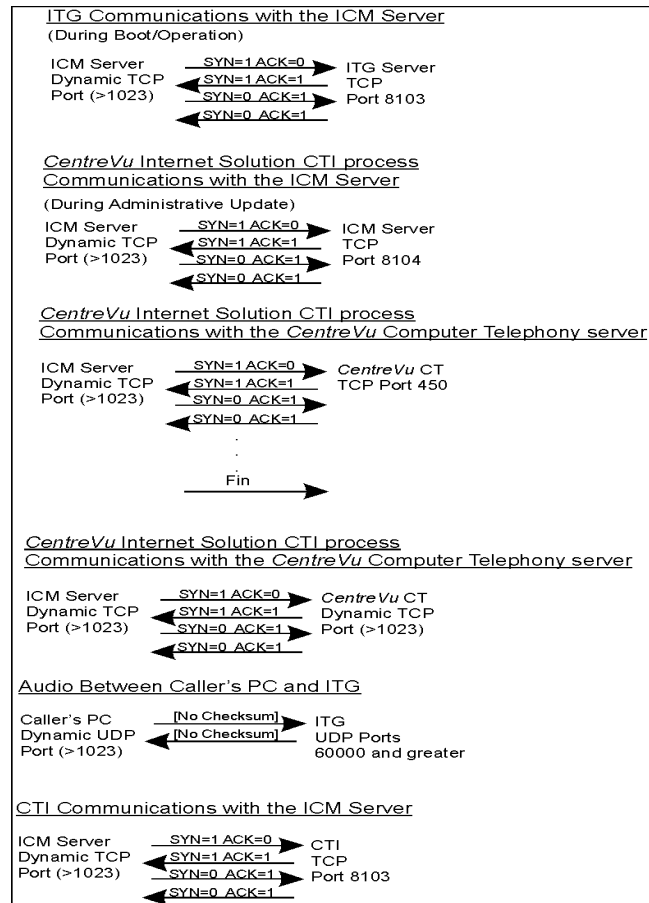


Server-to-server communication

The following illustrates server-to-server communication:



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



Design considerations for messaging

Overview

- Purpose** The purpose of this section is to help you design the messaging component of *CentreVu* Internet Solutions.
- Knowledge of *DEFINITY* ECS station administration and vector design would be helpful to fully understand the following sections:
- What needs to be defined (2-29)
 - Sorting messages (2-30)
 - Where do you want the messages to go? (2-36)
 - Types of messages (2-32)
 - Vectors (2-38)
 - Sample vector for basic message call delivery (2-42)
 - Sample vectors for retrieve and suspend (2-44)
 - Mailboxes that you need (2-49)
 - Considerations for specifying auto-acknowledgment text (2-50)
 - Bookmark agent and supervisor URLs (2-51)



What needs to be defined

Introduction Designing for the messaging software is primarily a matter of defining the following:

- The mailboxes for the messaging software to poll—ensuring that messages arrive in the correct mailbox is the first step in routing them to the best agents. The mailbox in which a message arrives determines the VDN that the messaging 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 messaging 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 messaging software receives the message.
- Globalization—the languages agents will be using to process messages.

To develop your messaging software design, consider the flow of the messages you expect to receive (consider the language of the customer and agent), from their point of origin to the point where the customer's request is satisfied. If you are unfamiliar with this flow, review it in *How CentreVu Internet Solutions works for messaging (3-17)*. Start by considering the customer who sends the message.



Sorting messages

Introduction The design of your messaging software depends on the types of messages you expect, your service expectations for handling each type of message, 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 customer wants information
 - Whether the customer already has the product or is considering purchasing the product
 - Whether the customer's question is technical or general
 - The urgency of the customer's question
- Auto-acknowledgment—the auto-acknowledgment can reassure a customer and thus reduce future inquiries about the progress of email queries.
- The following factors should influence your decision about whether to have the messaging software send an auto-acknowledgment to the customer before launching a message call:
 - The promptness with which you want the customer to hear back from you
 - Whether you want to assure the customer 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 customer to 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 messaging capacity purchased is 100, using vectors, the Internet contact 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, the messaging software 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 message call is active at an agent, the queue slot is available for another message call.



Types of messages

- 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 Customers 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 customer to provide the information you need to process a request efficiently and effectively. For instance, you can ask customers 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 customer.

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 customers 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 a customer 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 messaging mailbox. The factors determining this mailbox may be part of the information provided by the customer. The Web page where the customer chose your “Write to Us” link may also help. For instance, if the customer 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 customer, 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 messaging mailbox. This software may be able to use the information from the form to generate a sufficient answer for the customer automatically, so that the customer receives the desired information or assistance without the need for agent interaction. Otherwise, the software can route the message to the appropriate messaging mailbox.

How the messaging software routes forms-based email

Once the message arrives in a messaging mailbox, the messaging 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 customer, such as account number or home address
- Contact information about the customer, 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 customer's request

Support from Avaya

Only someone familiar with your business can specify exactly what information you need. However, Avaya Professional Services offers assistance in designing and constructing your “Write to Us” form. To contact Professional Services, call 1-877-9276662.

Free-form email Customers 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, customer concerns, and marketing campaigns. The messaging 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.

For example, if your contact center provided a *MAILTO* link on a customer Web page, then the customer 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 customer would then compose a message and click on a Send button. The email is then sent to the destination address (mailbox) monitored by the messaging software and delivered to an agent for processing.

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.

Fortunately, 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 messaging software.

File attachments Attachments can include any type of file. Generally, browsers are pre-configured to open popular types of attachments. However, it is up to you to administer any new file types with the helper applications. File types may include plain text, graphics, voice or other sound files, and files created in various spreadsheets, word processors, databases, and other applications. For further information, refer to your browser's help section.

Important! Install a virus checker on the agent's desktop to perform virus checking when opening file attachments received in email.

How the messaging software handles file attachments

The messaging software will store 20 attachments with each inbound message. If an inbound message contains more than 20 attachments, the messaging software truncates the message (that is, attachment 21 and beyond will be discarded).

Faxes

From the point of view of the messaging software, a fax is actually just one more type of file attachment to the messages it receives.

Customers 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 the messaging software works with faxes

The messaging 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.

NOTE: The messaging software itself does not include functionality for viewing fax images. To work with fax images, an agent must have a helper application for handling faxes through the browser.

Important! Faxes normally have a callback number but not an email return address. Without such a return address, the messaging software cannot send an auto-acknowledgment to the customer. Thus you should plan your mailboxes to keep fax messages separate from any messages where you want to send the customer an auto-acknowledgment.



Where do you want the messages to go?

Introduction The following are cases where email messages from customers should go directly to a specific agent instead of through a general messaging 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 Subject Matter Experts (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, the messaging software 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:

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

If you choose to have the messaging 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 (2-42)).

Vector programming can ensure that work is handled when agents are sick or on vacation. For more information on vectoring, please see Vectors (2-38).

Messages that should not go through the messaging software

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

Any agent expected to receive direct correspondence from customers should have two mailboxes, one for *CentreVu* Internet Solutions 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 *CentreVu* Internet Solutions message calls. To staff messaging 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 mailbox, the messaging software tells the *DEFINITY* ECS to launch a message call using the VDN associated with the mailbox where it found the message. EAS on the *DEFINITY* ECS then uses the vector associated with that VDN to give the message a proper place in the queue and to select an agent qualified to process the message.

Expanding the routing possibilities

To expand the routing possibilities for each mailbox, the messaging software also provides sorting within a mailbox by up to ten keywords, each with its own VDN. The messaging 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:

- 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.
- The skills agents need to handle the messages—defining the skill groups for handling *CentreVu* Internet Solutions 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 agent's language capabilities and the agent's knowledge of your products.

- In addition, the members of each skill group receiving message 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)
- Tracking 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 calls, there are some guidelines that need to be followed to avoid the possibility that the messaging software will lose monitoring for the message call.

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

If 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 the messaging software 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 the messaging software will lose track of the message call and thus, prevent it from doing a PagePop.

The messaging software 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 calls, it should monitor the initial VDN. If both the messaging software 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 (2-42)), 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 vector considerations

Consider the following when creating vectors for messaging:

- 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, the messaging software 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, the messaging software will relaunch the call 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 the following conditions: agent not logged in, agent busy, 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 messaging-provided adjunct route step which will provide the agent ID of the agent who initiated the retrieve request or suspended the message.
- The messaging software 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 the messaging software will drop active and launched message 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.

Vector sample 1description Vector sample 1 is for a contact 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 sections provide information about sample vector 1 and also provide the following design tips:

Limit message call queuing time

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

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

Message call disconnect

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

Vector step limit

Vectors are limited to 32 steps.

Limit number of message call queued per mailbox

Based on the staffing profiles of agents trained to support a mailbox, you may want to limit the number of message calls queued in a specific vector. Your 200 message extension resources need to be shared across all mailboxes in order to prevent starving (starving occurs when a select number of mailboxes 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.

Dropped message calls by a vector or by the messaging software

If the vector drops the message call, the dropped message call will be reported in CMS as a “Vector Disconnect.” If the messaging software drops the message call (for example, if the message call exceeds the 8 hour queue limit), the dropped message call will be reported as an “abandoned” message call.

Vector 1 (VDN 1000)

In the following sample, the messaging software launches the message call to VDN 1000 which directs message calls to Vector 1. The messaging software 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 messaging 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 customer's request, the messaging software will initiate a call to return the suspended 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 messaging 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, or failed status states, but cannot be retrieved in the closed or active states.

When the messaging 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 messaging 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 messaging 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 not to log out of the *DEFINITY* ECS while message calls are queued for them (indicated through lamps on the telephone).

- 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 the messaging software and *DEFINITY* ECS coverage insures that your customer's requests are serviced.
- Suspended messages should not go to coverage but should remain queued for the suspending agent if that agent is logged in to the system.
- You can implement different coverage treatment to live callers using a combination of the sample coverage vectors and by 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:
 - Activeset to No
 - Busyset to Yes
 - No Answerset to Yes with a specified number of rings
 - Coverage Pathone of the sample coverage vectors listed

With these coverage settings, internal Direct Agent Calling (DAC) calls such as message calls will immediately go to coverage if the agent is not logged in to the system (busy=Y). If the agent is logged in to the system, 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 message calls to wait for a short while until the agent is available.

Sample vectors The following sample vectors are provided:

- Sample 1suspend/retrieve vector (2-46)
- Sample 2agent coverage vector (2-47)
- Sample 3VDN using vector coverage routing table (2-48)

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 1suspend/retrieve vector

In this vector, message calls are routed using an adjunct route step where the messaging software will return the agent ID. If the agent is not logged in to the system, *DEFINITY* ECS will route the call following the agent's assigned coverage path. In sample 1, the messaging software launches the message call to VDN 2000 which directs message calls to Vector 200. The messaging software is monitoring VDN 2000.

Step 3 of sample 1 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 Class of Restriction (COR) on the adjunct link (in VDN 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)

VDN 2001 Vector 201

VDN 2001/Vector 201 provides coverage treatment for the message call. Vector 201 would queue the message call to one of the message skills. It would look similar to the sample vector provided in Vector 1 (VDN 1000) (2-43).

**Sample 2agent coverage
vector**

In this vector, vector processing diverts traditional calls to coverage appropriate for live calls, such as voice mail, and queues the 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 messaging software 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 calls were queued to the message 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 3VDN 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 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 calls using Automatic Number Identification (ANI) routing along with vector routing tables. The message call extensions used to initiate 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 the messaging software.

In the example below, the message call extensions for the messaging software 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 skill)



Mailboxes that 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 customer chooses the appropriate keyword.

Planning your message 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 messaging 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 contact 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 auto-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. The messaging software supports only a single text file 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 the messaging software.

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

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 messaging software provides a field tool to test a contact center's server for compliance with the requirements of the POP3 and SMTP protocols.

Important! You should test the auto-acknowledgment, including a customer response to the received acknowledgment before you go to live production.



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?* (1-26) 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 (Japanese operational mode), the messaging software stores message information in the *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.

software Type	Where is information stored?	How is information stored?
From AddressEmail handle	Messages TableSendersAddress	The email handle (for example, services@company.com) is stored in ASCII.
From AddressName	Messages TableSendersName	The friendly name (for example, Joe Smith) is stored as it is received (most likely in JIS).
Subject	Messages tableSubject	The subject will most likely be received in JIS but the messaging software will convert the subject to JIS.
Headers	Messages tableHeaders	The messaging software will store the headers in ASCII.
Body	Messages tableBody	The messaging software will store the body as it is received (either ASCII, JIS, or shift-JIS).
Message Date	Messages tableMessage Date	The messaging software will store the message date in ASCII.
Message Header ID	Messages tableMessageHeaderID	The messaging software will store the message header ID in ASCII.
To Address	Messages tableToAddress	The messaging software will store the to address in ASCII.
MIME type	Attachments tableMimeType	The messaging software 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.

software Type	Where is information stored?	How is information stored?
Body	Outbound TableBody	The messaging software stores the outbound body in JIS.
Destination address	Outbound TableToAddress	The messaging software stores the destination address in ASCII.
Copy To List	Outbound tableCCList	The messaging software stores the outbound copy to list in ASCII.
Subject	Outbound tableSubject	The messaging software will store the headers in JIS.
Attachment file name	Outbound tableAttachmentName	The messaging software stores the outbound attachment file name in JIS.
From Address	Outbound tableFromAddress	The messaging software will store the outbound from address in ASCII.



3 CentreVu Internet Solutions configuration

Overview

- Purpose** This section provides the recommended configuration for *CentreVu* Internet Solutions as well as a description of each component in the product.
- Audience** This section is intended for installers, system administrators, or any other persons involved in connecting or installing hardware or software for *CentreVu* Internet Solutions. This includes Avaya's Technical Support organizations.
- Contents** The following information is described:
- Standard configuration (3-2)
 - How components are connected (3-22)
- References** The following documentation contains information relevant to the connectivity of *CentreVu* Internet Solutions:
- *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 *CentreVu* Internet Solutions.

Contents The following information is presented:

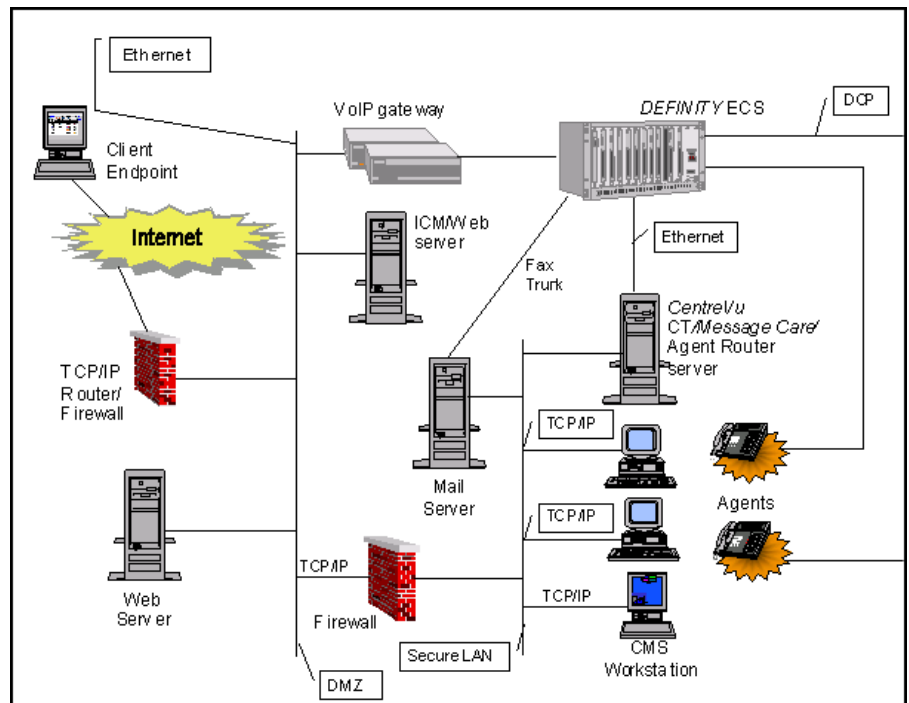
- Standard configuration (3-3)
- Description of components (3-4)
- How the DEFINITY ECS works with CentreVu Internet Solutions
- How CentreVu Internet Solutions works for Internet sessions (3-14)
- How CentreVu Internet Solutions works for messaging (3-17)



Standard configuration

Standard configuration illustration

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



□

Description of components

- Overview** This section provides a brief description of each *CentreVu* Internet Solutions component. The following components are discussed:
- Voice over IP (VoIP) gateways (3-4)
 - DEFINITY ECS (3-6)
 - Mail server (3-8)
 - Internet Call Manager (ICM) (3-8)
 - Agent Router process (3-9)
 - CentreVu Computer-Telephony (3-9)
 - Message Care (3-11)
 - CentreVu Call Management System (CMS) and Supervisor (3-11)

Voice over IP (VoIP) gateways The role of the VoIP gateway is to convert between packetized Internet voice and the circuit-switched voice used by the *DEFINITY* ECS. Your contact center can mix and match the various types of gateways to increase Internet voice processing capacity.

The following VoIP gateways can be used with *CentreVu* Internet Solutions:

- Internet Telephony Gateway (ITG) (3-4)
- DEFINITY IP Solutions (3-5)
- Avaya IP600 Internet Protocol Communications Server (3-6)

Internet Telephony Gateway (ITG)

Avaya, Inc. discontinued the Internet Telephony Gateway (ITG) on December 4, 2000; therefore, customers can no longer purchase an ITG. However, prior to December 4, 2000, customers could purchase the ITG to provide VoIP gateway functionality.

The following information about the ITG is provided for existing customers who are using an ITG:

- The ITG is a hardware component that is an industrial grade, *Pentium*-based PC running *LynxOS* (a *UNIX*-compatible real time operating system). The ITG receives customer requests and launches voice sessions into the contact center over an Integrated Services Digital Network-Primary Rate Interface (ISDN-PRI) channel to the *DEFINITY* ECS.

- The ITG 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 telephone callbacks 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* IP Solutions**

DEFINITY IP Solutions eliminates the need for an external H.323 gateway; this functionality is provided by the combination of an IP Media Processor (TN2302AP) board and a C-LAN (TN899B/TN899C) board residing in the *DEFINITY* ECS. Each such combination supports up to 31 simultaneous Internet voice sessions.

There are several points to keep in mind when considering this solution:

- There is no protocol conversion (IP to PRI) between the Internet and the switch to help buffer the switch from the Internet; therefore, using *DEFINITY* IP Solutions extends the contact center's DMZ LAN into the *DEFINITY* ECS. Your contact center must ensure that it follows standard security measures to maintain the integrity of the switch.
- *DEFINITY* IP Solutions relies on the *DEFINITY* processor to perform gatekeeper functionality and signaling as the IP Media Processor board converts the IP voice into circuit-switched voice; therefore, an Internet voice session consumes more *DEFINITY* ECS processing power than does a normal telephone call.
- *DEFINITY* IP Solutions integrates into the *DEFINITY* ECS chassis; therefore, it is a simpler and lower-cost configuration for smaller installations.

Avaya IP600 Internet Protocol Communications Server

The IP600 accepts packet-switched voice, converts it to circuit-switched voice, and passes on the results to the *DEFINITY* ECS over either a PRI or IP link. One IP600 can handle up to 60 simultaneous VOIP sessions (each block of 30 sessions requires one each of the following cards: C-LAN, IP Media Processor, and DS1).

Using IP600s, your contact center can extend Internet voice processing capacity by:

- Adding fully-configured IP600s
- Connecting two IP600s together so that they share the same Processor and Call Classifier boards
- Combining these methods.

***DEFINITY* ECS**

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

CentreVu Internet Solutions utilizes the *DEFINITY* ECS's advanced ACD features to process and route real-time and message calls to the appropriate endpoints. *CentreVu* Internet Solutions 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 *CentreVu* Internet Solutions 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 forth).

There are *CentreVu* Internet Solutions administration requirements for the *DEFINITY* ECS. For administration requirements, see Administering the *DEFINITY* ECS (6-49).

***DEFINITY* ECS requirements for Internet sessions**

Internet sessions require the following *DEFINITY* components:

- *DEFINITY* ECS G3V5 or greater; if you use ASAI Phantom calls, then *DEFINITY* ECS R6.3 or greater 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 IP gateway)
 - LAN Gateway or the MAPD board with LAN Gateway software
- Enabling the use of ASAI phantom calls for text chat and callback calls will avoid using PRI resources. This is because the calls are launched using ASAI, and are kept completely internal to the *DEFINITY* ECS. Internet voice using ITG or PRI-connected IP600 gateways still require the use of PRI B channels because there is an audio component which must come to the *DEFINITY* ECS over PRI trunks.

***DEFINITY* ECS requirements for messaging**

Message calls require *DEFINITY* ECS G3, Release 6.3 (minimum), 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 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 messaging component uses one association for each 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 (2-38).

Your traffic engineering must also take into account the longer hold times normally expected in processing messages. Queue allocation between mailboxes is also an important traffic consideration. For more information, please see Vectors (2-38).

It is important to include traffic and CTI considerations when designing your message handling vectors. Since vector-design requirements are different for each contact center, the messaging component 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 messaging software, see Design considerations for messaging (2-28).

Mail server

The mail server containing the mailboxes polled by the messaging component must be POP3-compliant over a Transmission Control Protocol/Internet Protocol (TCP/IP) stack. To handle outgoing messages from the messaging 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)

The ICM and the Agent Router 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. If an agent logs in to the *DEFINITY* ECS successfully, the CTI informs the ICM and the ICM then updates the agent applet with a "Login was successful" message.

In general, the ICM provides the following functions:

- Maintains and monitors agent sessions
- Downloads the agent's and caller's applet and maintains their connections
- Updates the agent applet based on agent login status
- Updates agent and caller Web pages based on call events
- Provides *CentreVu* Internet Solutions capabilities such as escorted browsing once the caller and agent are connected

Agent Router process

In general, the Agent Router provides the following functions:

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

***CentreVu* Computer-Telephony**

The *CentreVu* Computer-Telephony (*CentreVu* CT) is a software component of *CentreVu* Internet Solutions that runs on a server to track and associate various elements of calls between callers and agents. *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 Agent Router interfaces with the *CentreVu* CT server to monitor call progress information within the contact center domain (and then passes this information to the ICM) and to launch calls.

Important! *CentreVu* CT can reside on the same server as the ICM, Agent Router, and/or the messaging software.

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 Solutions components and the *CentreVu* CT server include:

- TCP/IP to the Agent Router
- TCP/IP to the *DEFINITY* ECS

Message Care

Message Care is a software component of *CentreVu* Internet Solutions that 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).

Features of the messaging software, includes the following:

- Support for *Microsoft* SQL Server 7.0 and SQL Server 2000
- 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
- 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
- Spell checker for outbound messages
- Message database and interface
- Administrative database and interface
- Computer-Telephony Integration control engine
- *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 real-time system.

Important! The messaging software can reside on the same server as the ICM, Agent Router, and/or *CentreVu* CT software.

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

CentreVu Call Management System (CMS) and Supervisor

The messaging system optionally supports the *CentreVu* Call Management System to collect standard call statistics for message calls. This software must be installed on a *Sun* platform that is LAN-connected. *CentreVu* Supervisor with the Report Designer option is required to produce CMS custom reports for message data.



How the DEFINITY ECS works with CentreVu Internet Solutions

Process flow for *DEFINITY* ECS interaction with *CentreVu* Internet Solutions

- 1** Agent login—the functionality of the *DEFINITY* ECS can be described in the context of agent operations during *CentreVu* Internet Solutions sessions. To staff a *CentreVu* Internet Solutions 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 receive sessions. 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 in the agent. This lets the *DEFINITY* ECS know about the agent.

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

- 3** Reporting progress—throughout this process the *DEFINITY* ECS is reporting the progress of the session to the *CentreVu* Computer-Telephony server. When the agent answers the session, 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 Agent Control Window (the user interface for the agent).

-
- 4** Disconnecting the session—once a session connects, the agent can disconnect it using different methods. The following list explains what happens during each disconnect method:
- If the agent hangs up using the telephone, the *DEFINITY* ECS notifies the ICM server by way of the *CentreVu* Computer-Telephony server that the session has been dropped.
 - If the agent drops the session through the Agent Control Window (or the Close or Suspend buttons for messages), the ICM server notifies the *DEFINITY* ECS by way of the *CentreVu* Computer-Telephony server that the session has been dropped.
-
- 5** Log outthe 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 telephone, the ICM server is notified through the *CentreVu* Computer-Telephony server.



How CentreVu Internet Solutions works for Internet sessions

Process flow for Internet sessions

- 1 Agent login—in a typical contact center, agents log in by way of a Web page, using a Java-enabled Web browser on a desktop. A 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 sessions. 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 8, How to process Internet sessions for details on how Internet sessions work from an agent's point of view.

- 2 Customer requests session—a typical session starts with a person surfing the Web who discovers a need to reach the contact center and selects a “Contact Us” button on a Web page.

The customer requests one of the following types of sessions:

- Voice and chat—an Internet telephony session with text chat
- Chat only—a text chat session with no voice
- Callback only—a conversation with an agent using the regular telephone line (escorted browsing is not available with this option)
- Callback and collaborate—an escorted browsing session combined with a conversation using a regular telephone line (this type of request requires that the customer has the ability to remain on the Internet while speaking on the telephone). This option is useful for customers that are not equipped to handle Internet telephony sessions.

-
- 3** If the customer requests a session type other than callback only, a Caller Control Window downloads to the customer's desktop. The Caller Control Window provides session progress status, enables the text chat, escorted browsing and HTML forms sharing functions, and allows the customer to end the session.

(If the customer requests only a callback, then the agent is notified that the customer wishes to receive a telephone call at the specified number. No Internet session or Web-based collaboration is established.)

- 4** Agent receives Internet session—the ICM initiates the session launch to the *DEFINITY* ECS (for a text chat session), where the session is queued, awaiting an available agent with Internet skills. If the session type is Internet voice, then the VoIP gateway launches it to the *DEFINITY* ECS.

When an agent becomes available, the session is delivered to the agent's telephone. When the agent answers, 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 session such as information entered by the customer. If administered, the ICM can also deliver a URL to the customer.

-
- 5** Communication between the Agent and the customer begins—after the agent answers the session, the customer 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 session includes Internet telephony, they may also talk to each other, the agent using a phone and the customer using a headset or microphone and speakers connected to the desktop.

With the callback and collaborate option, both the agent and the customer are able to talk through their phones and share Web pages (escorted browsing).

If the customer requested only a callback, 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 regular telephone to the customer.

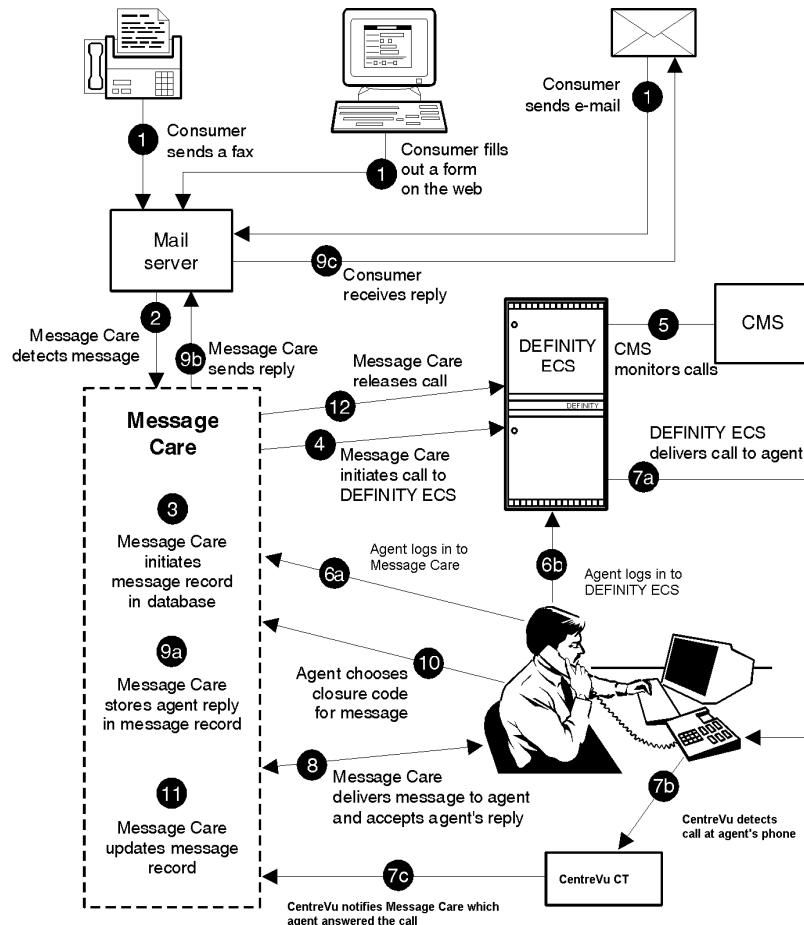
-
- 6** End session—either party has the capability to end the session.



How CentreVu Internet Solutions works for messaging

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

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



Typical scenario for a message call

- 1 A customer sends a message to the contact 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 customer to compose a message and send it to your contact center.

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

At the contact 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 best service possible.

- 2 The messaging software detects the arriving message by polling an administered list of mailboxes every five minutes.
-

- 3 The messaging 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 messaging software automatically sends a preformatted acknowledgment to the customer, 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 messaging software stops here and does not process the message for delivery to an agent.

- 4** The messaging software initiates a call to the *DEFINITY* ECS, using the VDN administered for the receiving mailbox. (If this message is a response concerning another message which the messaging software is currently handling, the messaging software links it to the call for that original message.)

If incoming messages exceed the administered capacity, the messaging software holds the overflow messages. When resources become available, the messaging software initiates message calls for the overflowed messages.

- 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 for as long as the message call is active.
-

- 6** An agent logs into the messaging component and the *DEFINITY* ECS.

Normally, the agent uses a workstation at the contact center, but the messaging component can also provide for remote agents. For further information on enabling remote agents to handle message calls, contact Professional Services at 1-877-9276662.
-

- 7** The *DEFINITY* ECS selects an available agent according to the vector associated with the assigned VDN, and sends the message call to the agent's telephone. When the agent answers the telephone, *CentreVu* CT sends a message call-answered notification to the messaging software. Meanwhile, if the VDN so specifies, the agent hears an announcement stating that this is a message call.

-
- 8** When the messaging 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 messaging software supplies the agent's browser with the URL associated with the mailbox that received the customer's message. This URL calls a CGI script. The messaging 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 customer'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 messaging software lists the attachments. Helper applications administered in the agent's browser provide access to these files.

The agent handles the message, using the controls supplied on the Web page that appears.

Important! The contact center must provide the appropriate helper applications for each agent, based on the types of messages you expect that agent to receive. For instance, agents who process faxes must have a helper application for viewing and handling them.

-
- 9** The messaging software submits the agent's reply for delivery by a mail server, using SMTP. It also stores a copy of the reply in the message database, linked to the original incoming message.
-

- 10** The agent selects a closure code for the message. For instance:

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

The contact center determines closure codes according to business needs. The record for the processed message remains in the database so that you can include it in reports or look it up in the future.

11 The messaging software updates the message call.

12 The messaging software releases the message call.



How components are connected

Overview

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

Contents The following components are discussed:

- DEFINITY ECS connectivity (3-23)
- Voice over IP gateway connectivity (3-24)
- CentreVu Computer-Telephony for Windows NT/Message Care server connectivity (3-27)
- Internet Call Manager connectivity (3-28)
- Mail server (3-8)
- Ancillary CentreVu Internet Solutions component connectivity (3-30)



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 board with LAN Gateway software. This *DEFINITY* LAN Gateway card and the MAPD 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 board, three slots are required instead of five.

The *DEFINITY* LAN Gateway or MAPD board should not be connected to the *CentreVu* Internet Solutions 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 Solutions 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 the *DEFINITY* ECS configuration

An existing LAN Gateway card (or MAPD board) and/or an existing *CentreVu* Computer-Telephony/ *Message Care* server may be used. However, you should discuss security and interoperability of this design prior to implementing it. Such designs should be configured and technically assured by an Avaya Account team through normal channels for *CentreVu* Computer-Telephony/Messaging server support.



Voice over IP gateway connectivity

Internet Telephony Gateway (ITG) connectivity

Avaya, Inc. discontinued the Internet Telephony Gateway (ITG) on December 4, 2000; therefore, customers can no longer purchase an ITG. However, prior to December 4, 2000, customers could purchase the ITG to provide VoIP gateway functionality.

ITG connectivity to *CentreVu* Internet Solutions

The ITG is connected to the *CentreVu* Internet Solutions 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 customer'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 contact 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* 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.

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. Avaya 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 so that Avaya can 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 real-time software based configurations supporting up to 60 Internet voice sessions.

Refer to the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document for detailed information about configuring the ITG. Your Avaya Account team can also help you configure the ITG server in accordance with your business' unique needs and requirements.

IP600 connectivity

IP600 connectivity to the ICM server

There is no direct cable connection between an IP600 gateway and the ICM server.

IP600 connectivity to the *DEFINITY* ECS

Requirements for IP600 connection to the *DEFINITY* ECS 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 IP600 and *DEFINITY* ECS are co-located within direct cabling distance). See the *DEFINITY Communications System Implementation* document for details. Otherwise, Channel Service Units (CSUs) must be used on both the *DEFINITY* ECS side and the IP600 side, along with appropriate cabling for the *DEFINITY* ECS-to-CSU connection and the IP600-to-CSU connection.
- ISDN-PRI must be enabled on the *DEFINITY* ECS.

IP600 maintenance connectivity

Refer to *Maintenance for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4* (555233111).

IP600 configuration

Refer to *Installation and Upgrade for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4* (555233109).

DEFINITY IP Solutions connectivity

The *DEFINITY* IP Solutions VoIP gateway is based on C-LAN and IP Media Processor circuit packs that reside in the contact center's *DEFINITY* ECS. Refer to *DEFINITY® ECS Release 9 Administration for Network Connectivity, Issue 2* (555233504).



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

Connectivity The *CentreVu* Computer-Telephony for 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 Solutions subnet.



Internet Call Manager connectivity

Connectivity The ICM server communicates using TCP/IP over a socket on the LAN. The ICM server needs an Ethernet NIC and wiring to the LAN. The CTI on the ICM server provides an interface between the Internet domain and telephony functions of the switching domain of the contact center. The CTI interfaces with the ICM process to pass incoming Internet requests to the contact center and to pass contact center status and responses back to the ICM. The CTI interfaces with the *CentreVu* Computer-Telephony/ *Message Care* server to monitor session progress information within the contact center domain and to launch sessions. The CTI process may reside on the same server as the *CentreVu* Computer-Telephony and messaging software.



Mail Server connectivity

Connectivity The mail server and *Message Care* server are connected and communicate by way of the Ethernet 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 the standard configuration, the *DEFINITY* ECS is bypassed and the *Message Care* server connects to the mail server by way of the LAN (as always).



Ancillary CentreVu Internet Solutions component 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 *CentreVu* Internet Solutions.

LAN connectivity The LAN, composed of hubs, routers, and possibly switches, is used to connect *CentreVu* Internet Solutions components, including agent PCs. *CentreVu* Internet Solutions 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 gateway 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 Solutions components. *CentreVu* Internet Solutions communications between the agent and the Agent Router use TCP connections that must remain up for the duration of an agent's logged-in time.

The Avaya Advanced Data Networking specialists or Avaya Professional Services can assist in provisioning and tuning data networks. Contact your Avaya 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 Solutions components. It may also be used to connect agents to the ICM/CTI server if the agents are on remote *DEFINITY* ECS expansion port networks (EPNs). The WAN must provide dependable transport of Internet sessions and message calls between agent PCs, the ICM/CTI server, and any servers (including those on the Internet) the agent uses to service real-time sessions and message calls.

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

Support from Avaya

The Avaya Advanced Data Networking specialists can assist in provisioning and tuning data networks. Contact your Avaya 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 contact 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 and may be housed on a separate Web server.

The Web server is the first point of contact for any *CentreVu* Internet Solutions activity. When agents log in, they generally access the login page from this Web server. When customers place Internet sessions or message 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 Solutions 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 customer communications. The reliability of DNSs can affect the overall ability of the contact center to service the Internet.

Firewall

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

CentreVu Internet Solutions components are generally placed on their own subnet. This placement keeps *CentreVu* Internet Solutions traffic off the contact center's network and allows the firewall to pass messages through the ports necessary for *CentreVu* Internet Solutions functionality without significantly disrupting existing firewall rules for internal networks. The firewall ports to the *CentreVu* Internet Solutions subnet allow *CentreVu* Internet Solutions-required TCP and User Datagram Protocol (UDP) traffic, while firewall ports to internal secure LANs drop such traffic. See *Ports and protocols (2-20)* for further information on ports and protocols.

Support from Avaya

The Avaya 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 your Avaya Account Representative for details on these and other offers.



4 Install and uninstall the Internet session software

Overview

- Purpose** The purpose of this information is to describe, at a high-level, the procedures for installing and uninstalling the Internet session software. The following real-time software is installed by Avaya personnel:
- Internet Call Manager software
 - Centralized Internet Routing Service software (for installation procedures, see Appendix A, Internet Pre-Route configuration)
- The following software must also be installed but is not part of the *CentreVu* Internet Solutions installation:
- *CentreVu* Computer-Telephony software
- Audience** This information is intended for installers, system administrators, or any other persons involved in installing software for the real-time component of *CentreVu* Internet Solutions. This includes the Avaya Technical Support Organizations.
- Contents** This section contains the following:
- Agent Router installation instructions (4-3)
 - Install the software on a Windows server (4-3)
 - Install the software on a Solaris platform (4-21)

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 real-time software is located in the NT or Solaris folder of the CVuIS ICC Software CD-ROM.



Install the software on a Windows server

Before you begin

Before you begin the installation, do the following:

- Stop the IIS World Wide Web Publishing service
- Read the *readme.txt* file (available on the CVuIS ICC Software CD-ROM in the NT folder).
- Stop *Message Care* if it is installed. See *Perform a graceful shutdown (12-25)* for instructions on shutting down *Message Care*.
- Uninstall any prior versions of ICM. See *Uninstall the ICM software from a Windows server (4-20)*.
- Ensure that your Windows server meets the minimum requirements—see *ICM server (1-23)*.

Agent Router installation instructions

- 1 Insert the CVuIS ICC Software CD-ROM into the server's CD-ROM drive.
-

- 2 From the NT folder, select ICM and then *setup.exe*.

Result: The Welcome page of the InstallShield Wizard will appear.

- 3 From the Welcome page, select the *Next* button.

Result: The InstallShield Wizard displays the License Agreement page.

- 4 Click the *Yes* button if you agree with the terms of the License Agreement. (If you do not agree, click the *No* button and the installation process will end.)

Result: The InstallShield Wizard displays the Information page.

-
- 5** The Information page is the *readme.txt* file. Please read the contents of the Information page to understand issues and learn about late-breaking changes to the software. After you have read the contents of the Information page, select the **Next** button.

NOTE: You can also view the *readme.txt* file before you begin the installation by opening it from the NT folder on the CVuIS ICC Software CD-ROM.

Result: The InstallShield Wizard displays the Required Hardware/Software page.

- 6** The Required Hardware/Software page provides the hardware and software requirements for your Windows server on which you will be installing the Agent Router software. If your Windows server meets the minimum hardware and software requirements, then select the **Next** button.

Result: The InstallShield Wizard displays the Choose Destination Location page.

- 7** The default destination folder where the Agent Router files will be installed is *C:\Program Files\Avaya*.

You can change the destination folder by selecting the **Browse** button and then choosing a different location. Once you have identified the destination location folder, select the **Next** button.

Result: The InstallShield Wizard displays the Product Selection page.

- 8** Select the *CentreVu* Internet Solutions product, and then select the **Next** button.

Result: The InstallShield Wizard displays the Select Components page.

-
- 9** By default, the Internet Call Manager, Internet Call Center, Jakarta Tomcat, Web Guidelines, and Avaya Voice Media Manager components are selected. Deselect all of these, select the Agent Router component, and then click the **Next** button.

Result: The InstallShield Wizard displays the Select Program Folder page.

- 10** Select a program folder, and then select the **Next** button. Avaya is the default program folder name.

Result: The InstallShield Wizard displays the Configure Avaya Internet Call Manager page.

Important! The field in the Configure Avaya Internet Call Manager page must contain the full domain name or IP address of the server where the ICM software is (or will be) installed.

- 11** The Configure Avaya Internet Call Manager page is requesting the ICM server domain name. If you have an existing parameters file on the server, this field will be populated (you may edit it if necessary). If the parameters file is not found on the server, enter the ICM server domain name or IP address. Select the **Next** button.
-

- 12** The Start Copying Files page provides information on the components and items that you selected during the installation. If you would like to change any of your selections or input, then use the **Back** button. If you are in agreement with your selections, select the **Next** button to complete the installation.

Result: The InstallShield Wizard copies the appropriate files and then checks for the correct version of JRE (1.3 or greater).

-
- 13** If the InstallShield Wizard does not find the correct version of JRE, the JRE installation process launches. Follow the steps for that process. If the InstallShield Wizard still cannot locate the JRE software, and you have installed it, specify the path up to (but not including) the *bin* directory—for example, *C:\Program Files\JavaSoft\JRE\1.3*.

Result: A message box displays indicating that the system is being configured and then a finish and reboot dialog appears.

- 14** Reboot the ICM server.

END OF STEPS

**ICM Installation
instructions**

To install the ICM software, do the following:

- 1** Insert the Internet Call Manager CD-ROM into the server's CD-ROM drive.
-

- 2** From the NT folder, select ICM and then *setup.exe*.

Result: The Welcome page of the InstallShield Wizard will appear.

- 3** From the Welcome page, select the *Next* button.

Result: The InstallShield Wizard displays the License Agreement page.

- 4** Click the *Yes* button if you agree with the terms of the License Agreement. (If you do not agree, click the *No* button and the installation process will end.)

Result: The InstallShield Wizard displays the Information page.

-
- 5** The Information page is the *readme.txt* file. Please read the contents of the Information page to understand issues and learn about late-breaking changes to the software. After you have read the contents of the Information page, select the **Next** button.

NOTE: You can also view the *readme.txt* file before you begin the installation by opening it from the NT folder on the CVuIS ICC Software CD-ROM.

Result: The InstallShield Wizard displays the Required Hardware/Software page.

- 6** The Required Hardware/Software page provides the hardware and software requirements for your Windows server on which you will be installing the ICM software. If your Windows server meets the minimum hardware and software requirements, then select the **Next** button.

Result: The InstallShield Wizard displays the Choose Destination Location page.

- 7** The default destination folder where the ICM files will be installed is *C:\Program Files\Avaya*.

You can change the destination folder by selecting the **Browse** button and then choosing a different location. Once you have identified the destination location folder, select the **Next** button.

Result: The InstallShield Wizard displays the Product Selection page.

- 8** Select the *CentreVu* Internet Solutions product, and then select the **Next** button.

Result: The InstallShield Wizard displays the Select Components page.

-
- 9** By default, the Internet Call Manager, Internet Call Center, Jakarta Tomcat, Web Guidelines, and Avaya Voice Media Manager components are selected.

You do not have to install the Web Guidelines component; you may view the Web Guidelines documentation directly from the Internet Call Manager CD-ROM at any time rather than installing it to a hard drive.

You may deselect the Tomcat component if you already have it installed or if you want to use the JRun servlet engine. If you do not install Tomcat because you already have it installed, you must configure it to work with *CentreVu* Internet Solutions (see *Manually configure Tomcat to work with CentreVu Internet Solutions (4-13)* for more information). See *Installing the JRun software (4-14)* for information on installing the JRun servlet engine.

NOTE: If you select the Demos component, you will have to modify the *include.js* file that is contained in the Test Bank and Fireball demos before these demos will work in your contact center. The *include.js* file provides instructions on what you must modify within it.

Click the box to the left of the component that you want to select or deselect, and then select the **Next** button.

Result: The InstallShield Wizard displays the Select Program Folder page.

-
- 10** Select a program folder, and then select the **Next** button. Avaya is the default program folder name.

Result: The InstallShield Wizard displays the Choose Destination Location page.

-
- 11** Enter the location where you have previously installed the ICM software (by doing this, you can preserve previous administration settings) and then select the **Next** button. If the ICM software is not installed, simply select the **Next** button. The default for previous installation is `C:\itg`.

Result: The InstallShield Wizard displays the Configure Avaya Internet Call Manager page.

Important! The field in the Configure Avaya Internet Call Manager page for ICM Server must contain the full domain name or IP address of the server where the ICM software is installed.

- 12** The Configure Avaya Internet Call Manager for ICM Server page is requesting the ICM server domain name. If you have an existing parameters file on the server, this field will be populated (you may edit it if necessary). If a parameters file is not found on the server, enter the ICM server domain name or IP address. Select the **Next** button.

Result: If you did not choose to install the Agent Router on this server, the Configure Avaya Internet Call Manager page for the Agent Router appears. If you chose to install the Agent Router software on this server, go to step 14.

Important! The field in the Configure Avaya Internet Call Manager for Agent Router page must contain the full domain name or IP address of the server where the Agent Router is executing.

- 13** The Configure Avaya Internet Call Manager for Agent Router page is requesting the Agent Router server domain name. If you have an existing parameters file on the server, this field will be populated (you may edit it if necessary). If a parameters file is not found on the server, enter the ICM server domain name or IP address. Select the **Next** button.

Result: The InstallShield Wizard displays the Choose Destination Location page for Tomcat.

-
- 14** The default installation directory for Tomcat is *C:\jakarta-tomcat*. Edit this path, if desired, and then select the **Next** button.

Result: The InstallShield Wizard displays the Select a Language page.

- 15** The Select a Language page allows you to pre-administer the ICM with languages. English (US) is the default and is automatically installed, and other languages are always available to add at a future date—this step is for extra convenience. Select any additional languages that you want to pre-administer and then select the **Next** button

Result: The InstallShield Wizard displays the Start Copying Files page.

- 16** The Start Copying Files page provides information on the components and items that you selected during the installation. If you would like to change any of your selections or input, then use the **Back** button. If you are in agreement with your selections, select the **Next** button to complete the installation.

Result: The InstallShield Wizard copies the appropriate files and then checks for the correct version of JRE (1.3 or greater).

- 17** If the InstallShield Wizard does not find the correct version of JRE, the JRE installation process launches. Follow the steps for that process. If the InstallShield Wizard still cannot locate the JRE software, and you have installed it, specify the path up to (but not including) the *bin* directory—for example, *C:\Program Files\JavaSoft\JRE\1.3*.

Result: A message box displays indicating that the system is being configured and then a finish and reboot dialog appears.

- 18** Reboot the ICM server.
-

- 19** Configure the Tomcat software (see *Configure the Tomcat software (4-11)*).

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

If you are going to install the messaging software on a different server than the ICM and Agent Router software, then you must copy the *license.dat* file to the same directory on both servers.

- 21** When you are finished installing the ICM software, specific parameters must be administered. See Chapter 6, Administration.
-

END OF STEPS

Configure the Tomcat software

To configure the Tomcat software, do the following:

- 1** Open the *Microsoft* IIS console.

- 2** Right-click on Default Web Site and then select the Properties button.

- 3** Click on the ISAPI filters tab and then select the Add... button.

- 4** Enter *jakarta* as the Filter name and enter *c:\jakarta-tomcat\bin\iis\i386\isapi_redirect.dll* as the Executable. (If you installed Tomcat to a directory other than the default, then replace *c:\jakarta-tomcat* in the above path with the installation path).

- 5** Select OK.

- 6** Stop and then start the World Wide Web Publishing Service.

- 7** Right-click on Default Web Site in the IIS console and then select the Properties item.

-
- 8** Click on the ISAPI filters tab. Ensure that the jakarta filter has a green up-arrow. If the green arrow is not present, check the Filter name to ensure correct spelling and the Executable field to ensure the correct path.
 - 9** Stop and then start the Jakarta Tomcat service.
 - 10** Return to step 20 of the installation instruction on installing the ICM on a Windows server to finish the ICM installation.
-

END OF STEPS



Windows Reference

Overview This section contains information on the following Windows-related topics:

- How to manually configure Tomcat software
- How to install the JRun software
- How to configure the JRun software
- How to access the text-based controls
- How to uninstall the ICM software

Manually configure Tomcat to work with *CentreVu* Internet Solutions

During the installation of the ICM, you were given the option to install the Tomcat component. If you chose not to install the Tomcat component because you already had it installed, then you must manually configure Tomcat now to work with *CentreVu* Internet Solutions. To manually configure Tomcat to work with *CentreVu* Internet Solutions, do the following:

-
- 1** Open the following files using a text editor: *c:\Program Files\Avaya\icm\tomcat\icc_sample_web.xml* and *c:\jakarta-tomcat\Webapps\Root\Web-inf\web.xml* (if you installed Tomcat to a directory other than the default, then replace *c:\jakarta-tomcat* with the installation path).
 - 2** Copy the following servlets from the Avaya *icc_sample_web.xml* file to the Tomcat *web.xml* file:
 - AdminServlet
 - WT
 - TS
 - CBScheduler
 - 3** Replace placeholder values in the *web.xml* file (such as *\$USERDIR\$*) with the appropriate value. All placeholders appear between dollar signs.
-

4 Save the Tomcat *web.xml* file.

5 Stop and then start the Tomcat service.

END OF STEPS

**Installing the JRun
software**

If you prefer, you may use the Allaire JRun servlet engine (which you must purchase separately) rather than the Jakarta Tomcat servlet engine. To install JRun and connect it to your web server, do the following:

1 Prepare your system by doing the following

- If you have an older version of JRun (pre-3.0), you should either uninstall it or set the startup of the JRun Service Manager to Manual
 - Stop the ICM and Agent Router services.
 - Stop the IIS Admin service and the World Wide Web Publishing Service.
-

2 Install the JRun software by doing the following:

1. Insert the JRun CD-ROM into your CD-ROM drive. The main installation page appears.
2. Select Allaire JRun Server 3.0 Installer for Windows from the Install section.
3. Follow the prompts through the installation process. Select the following options:
 - On the Setup Type page, select Custom.
 - On the Select Components page, select Servlet and JSP and Server. DO NOT select EJB, JMS, or JTA.
 - On the Install JRun Services page, select the Install JRun Services? check box.

- From the JRun Management Console page, enter 8383 for the Admin Server Port Number and then enter a password. Make note of the password.
- From the JRun Setup Complete page, select **Configure JRun** to connect to my external web server now. This option automatically starts the Connector Wizard so that you can connect JRun to your web server.

3 Connect JRun to your web server using the Connector Wizard by doing the following:

1. If you did not select **Configure JRun** to connect to my external web server now from the JRun Setup Complete page, you must manually start the Connector Wizard by doing the following:
 - a. Select **JRun->JRun Management Console** from the Start menu.
 - b. Enter **admin** as your login with the password that you entered during installation.
 - c. Select **Connector Wizard**.
2. Stop your web server service.
3. In the Step 1 page of the Connector Wizard, do the following:
 - a. Select **JRun Default Server** for the JRun Server Name.
 - b. Select the correct type, version, and platform of your third-party web server.
 - c. Select the **Next** button.
4. In the Step 2 page of the Connector Wizard, do the following:
 - a. Select the default JRun Server IP Address (127.0.0.1). If your web server uses a different IP address than that of the JRun server, enter that IP address instead of the default.
 - b. Enter **8000** for the JRun Server Connector Port number.
 - c. Select the **Next** button.
5. In the Step 3 page of the Connector Wizard, do the following:
 - a. Using the **Browse**, navigate to the web server (IIS) Scripts Directory and then select **Use this value**.
 - b. Check the **Install as Global Filter** option.
 - c. Select the **Next** button.
 - d. Click **Done**.

4 Proceed to Configure JRun (4-16).

END OF STEPS

Configure JRun

After you install the JRun software, you must configure it using the JRun Management Console (JMC). You can access the JMC locally by selecting JRun->JRun Management Console from the Start menu, or remotely by entering the following URL in your Web browser:

`http://{IP_address_of_JMC_server}:8383`

. To configure JRun using the JMC, do the following:

- 1** Configure the classpath by doing the following:
 1. Click the JRun Default Server item in the left pane of the JMC. A menu appears.
 2. Click Java Settings.
 3. Click Classpath. An edit window appears; you may have to expand the window or scroll through it to see the Classpath settings section.
 4. From the Input Field box, click below the default values and add the following values (where {userdir} is the value of the `userdir`=parameter in the ICM `default\systemParms.txt` file—typically `C:\Program Files\Avaya\icm`):
 - {userdir}\vdir
 - {userdir}\vdir\lftapia.zip
 - {userdir}\vdir\jcert.jar
 - {userdir}\vdir\jsse.jar
 - {userdir}\vdir\jnet.jar
 5. Select the Update button. You can see the values you just entered by clicking the pull-down arrow in the list box next to the Classpath.

2 Configure the aliases by doing the following:

1. Click the Web Application item in the left pane of the JMC. A menu appears.
2. Click on Default User Application. A menu appears.
3. Click on Servlet Definitions.
4. Select the Edit button in the right pane of the JMC. The Aliases window appears. Note that this window allows you to enter only two aliases at a time.
5. You must configure aliases for the required servlets (WT, TS, and AdminServlet) and also for those related to optional features such as Centralized Internet Routing Service (the CIRS and CIRSAdmin servlets) and scheduled callbacks (the CBScheduler servlet) that you have installed. For each servlet, class names and init arguments are as follows:
 - WT: `com.avaya.icm.servlet.WT` (classpath); `userdir={userdir}` (init argument)
 - TS: `com.avaya.icm.tunn.TS` (classpath); `icmHost={ICM server domain name or IP address}`, `pollInterval={milliseconds, defaults to 5000}` (init arguments)
 - AdminServlet: `com.avaya.icm.admin.AdminServlet` (classpath); `userdir={userdir}` (init argument)
 - CIRS: `com.avaya.icm.servlet.CIRS` (classpath); (no init arguments)
 - CIRSAdmin: `com.avaya.icm.admin.CIRSAdmin` (classpath); `userdir={userdir}` (init argument)
 - CBScheduler: `com.avaya.icm.servlet.CBScheduler` (classpath); `userdir={userdir}` (init argument)

6. Specify which servlets should be preloaded by JRun. If you are using JRun 3.01, you *cannot* use the JRun Management Console to administer the preload option—see the *readme.txt* file for information on how to manually perform this task. If you are using JRun 3.0, do the following to administer preloaded servlets through the JMC:
 - a. Click the `preLoad` order button. A window appears.
 - b. Select WT, TS, and AdminServlet under `Not Preloaded`, and then click the `>` button transfer all three to `PreLoaded`. The order in which the servlets preload does not matter.
 7. Click the `Update` button.
-

3 Configure the JRun Web Server by doing the following:

1. Click on `JRun Web Server` in the left pane of the JMC.
 2. Click on `JRun Web Server` in the right pane of the JMC. A window appears; you may have to expand the window or scroll down to find the `JRun Web Server`.
 3. Uncheck the `Input Field` checkbox.
 4. Click the `Update` button. The `JRun Web Server` will have a value of `off`.
-

4 Configure the JRun Default Server by doing the following:

1. Open the Control Panel->Services dialog box.
 2. Select the `JRun Default Server` and then click `Startup...`
 3. Select the `Allow Service to Interact with Desktop` checkbox.
 4. Click the `OK` button.
-

5 Restart the JRun service by doing the following:

1. Click on `JRun Default Server` in the left pane of the JMC.
2. Click on the `Restart Server` button in the right pane of the JMC.

END OF STEPS

Text-based controls

You can get ICM, Agent Router, and CIRS control window functionality through a text-based interface by doing the following:

-
- 1** Open a command prompt window on the system on which the software you want to administer is installed. (Depending upon your contact center's configuration, all of the software may be on one server, or ICM may be on a different server from Agent Router, etc.)
 - **2** Change directory to *C:\Program Files\Avaya\icm\mdir* (or the directory where *mdir* is if the software is not installed in the default installation directory).
 - **3** Enter one of the following commands, depending on which control window you wish to access:
 - `texticm.bat` for ICM
 - `textar.bat` for Agent Router
 - `textcirs.bat` for CIRS

Result: The connection is established after a brief interval.

-
- 4** Enter `display commands` to see a list of available commands.
 - **5** Administer the system as necessary.

END OF STEPS

**Uninstall the ICM software
from a Windows server**

To uninstall the ICM software, do the following:

- 1 Before you uninstall the ICM software, you must stop the following services:
 - Avaya Internet Call Manager service
 - Either the Jakarta Tomcat service or JRun service (depending on which servlet engine you are using)
 - Avaya Voice Media Manager service (if installed)
 - Agent Router serviceTo stop the services, do the following:
 1. From the Control Panel, select Services (in *Windows 2000*, Control Panel-->Admin tools-->Services).
 2. For each service, click on the service name and then click Stop.
- 2 From the Control Panel, select Add/Remove Programs.
- 3 Select Avaya Internet Call Manager program (default name), and then select the Add/Remove... button.
- 4 You may be notified of shared (or locked) files. Answer Ignore or Reboot.

END OF STEPS



Install the software on a Solaris platform

Overview

The purpose of this information is to describe the procedures for installing the *CentreVu* Internet Solutions software in Solaris operating environments.

Installing the Internet Call Manager software on a Solaris operating environment entails the following:

- Installation procedure (4-22)
- Configure the Apache Web server and Jserv (4-25)

Prerequisites for installing the software on Solaris

Prior to installing the software, see ICM server (1-23) for requirements.

Before you begin installing the *CentreVu* Internet Solutions software, ensure the following:

- Your servers are running Solaris 7 or 8.
- You have knowledge of the Apache Web Server software and Jserv.
- You have the CVuIS ICC Software Release 4.5 CD-ROM.

Understanding Solaris configurations

You can install all of the *CentreVu* Internet Solutions packages (ICC, ICM, Agent Router, VMM, and CRS) on one server. Typically, however, a contact center will spread this software across multiple servers in order to put some of the elements behind firewalls.

Use the following table to determine what *CentreVu* Internet Solutions packages, additional software, and servlets to install/administer on each type of server:

Server	<i>CentreVu</i> Internet Solutions package(s) to install	Install Apache?	Install JServ?	Install JRE 1.3?	Servlets used
Web	AvayaICC ¹	Yes	No ²	No	domainlinker ³
ICM	AvayaICC AvayaICM	Yes	Yes	Yes	domainlinker ³ , AdminServlet, WT, TS, CBScheduler
Agent Router	AvayaAR	No	No	Yes	n/a

Server	CentreVu Internet Solutions package(s) to install	Install Apache?	Install JServ?	Install JRE 1.3?	Servlets used
VMM	AvayaVMM	No	No	No	n/a
CIRS	AvayaCRS	Yes	Yes	Yes	CIRS, CIRSAdmin
1. Optional—install AvayaICC on the Web server if you want to use the sample web pages. 2. Unless you use the servlet version of domainlinker, in which case you must install JServ on the Web server. 3. If your Web server is separate from your ICM server, you need either the domainlinker servlet or the domainlinker Perl script.					

A typical *CentreVu* Internet Solutions configuration has three separate servers: a Web server, an ICM server (also running the Voice Media Manager software), and an Agent Router server.

Installation procedure

Important! This procedure illustrates how to install all of the *CentreVu* Internet Solutions packages and additional software on a *single* server. If you are installing different elements on different servers, modify these instructions accordingly, using the table in Understanding Solaris configurations (4-21) as a guide for which packages and additional software to install on each separate server.

To install the software on a single Solaris server, do the following:

- 1 Create a directory to extract ICM files.
- 2 Insert the CVuIS ICC Software Release 4.5 CD-ROM in the CD-ROM drive.
- 3 From the Solaris folder, copy the following files to the directory that you created in step 1:
 - *AvayaICM.tar*
 - *AvayaICC.tar*
 - *AvayaAR.tar*
 - *AvayaCRS.tar*
 - *AvayaVMM.tar*

4 Enter the following commands to unpack the files:

- `tar xvf AvayaAR.tar`
 - `tar xvf AvayaICC.tar`
 - `tar xvf AvayaICM.tar`
 - `tar xvf AvayaCRS.tar` (if your contact center will be using the Internet Pre-Route feature, which requires the Centralized Internet Routing Service)
 - `tar xvf AvayaVMM.tar` (if your contact center will be using the Avaya Web Voice Client, which requires the Voice Media Manager)
-

5 From the root login (su root), install the ICM software to the default directory `/export/home/itg.ss` using the following command:

- `pkgadd -d . AvayaICM`
- `pkgadd -d . AvayaICC`
- `pkgadd -d . AvayaAR`
- `pkgadd -d . AvayaCRS`
- `pkgadd -d . AvayaVMM`

When viewing the license text, type Enter to go to the next page. You must answer "y" to accept the license agreement in order to proceed with the installation.

NOTE: If you do not want to install the ICM software in the default directory, then use the following commands:

- `pkgadd -a AvayaICM/install/admin -d . AvayaICM`
- `pkgadd -a AvayaICC/install/admin -d . AvayaICC`
- `pkgadd -a AvayaAR/install/admin -d . AvayaAR`
- `pkgadd -a AvayaCRS/install/admin -d . AvayaCRS`
- `pkgadd -a AvayaVMM/install/admin -d . AvayaVMM`

If you change the default directory, you will have to modify the following files to reflect the new directory:

- *icm.properties*
- *jserv.properties*
- *httpd.conf*
- */etc/init.d/avaya.icm* (this is the file that automatically starts the ICM process)
- */etc/init.d/avaya.ar* (this is the file that automatically starts the Agent Router process)
- */etc/init.d/avaya.vmm* (this is the file that automatically starts the VMM process)
- */etc/init.d/avaya.cirs* (this is the file that automatically starts the CIRS process)

-
- 6** Run the ICM configuration script (*icmconfig.sh*) from the *icm/vdir* directory. This script creates the *systemParms.txt* file and configures the *icm.properties* file.

You will be presented with a series of questions. Answer all of the questions to complete the installation.

-
- 7** Run the Agent Router configuration script (*arconfig.sh*). This script configures the *ar.sh* command in *vdir* and the */etc/init.d/avaya.ar* command.

-
- 8** If you want to use the Centralized Internet Routing Service (CIRS) feature, then you must remove the comment (#) from specific entries in the *icm.properties* file. This file is located in */export/home/itg.ss/icm*.

From the # Startup Servlets section in the *icm.properties* file, do the following:

- Remove the comment from the following line:

```
#
servlets.startup=AdminServlet,WT,TS,CBScheduler,CIRSAdmin,CIRS
```
- Add a comment (#) to the following line:

```
servlets.startup=AdminServlet,WT,TS,CBScheduler
```


From the # Servlet Aliases section in the *icm.properties* file, remove the comment from the following lines:

- `# servlet.CIRS.code=com.avaya.icm.servlet.CIRS`
- `# servlet.CIRSAdmin.code=com.avaya.icm.admin.CIRSAdmin`

From the # Aliased Servlet Init Parameters section in the *icm.properties* file, remove the comment from the following line:

`# servlet.CIRSAdmin.initArgs=userdir=/export/home/itg.ss/icm`

-
- 9** Copy the *license.dat* file to the */export/home/itg.ss/icm* directory. The software will not operate without this file in place.

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

Configure the Apache Web server and Jserv

After you have installed the ICM files on Solaris, you must configure the Apache Web server and Jserv to have *CentreVu* Internet Solutions aliases and servlets. To configure the Apache Web server and Jserv, do the following:

-
- 1** Copy the *icm.properties* file to the Apache *conf* directory (for example, */usr/local/apache1.3.12/conf*). The *icm.properties* file is located in the directory where you installed the ICM software (for example, */export/home/itg.ss/icm/vdir*).

-
- 2** Administer the appropriate servlets in the *icm.properties* file. For example, in the Startup Servlets section of the *icm.properties* file, there should be a line like the following that reflects each servlet needed:

`servlets.startup=AdminServlet, WT, AgentRouter,
CBScheduler`

-
- 3** In the Servlet Zones parameters section of the *jserv.properties* file, add the following lines:

- `zones=icm`
- `icm.properties=/usr/local/apache1.3.12/conf/icm.properties`

In the Execution parameters section of the *jserv.properties* file, add the following lines:

- `wrapper.classpath=/export/home/itg.ss/icm/vdir`
- `wrapper.classpath=/export/home/itg.ss/icm/vdir/
ltjtapia.zip`
- `wrapper.classpath=/export/home/itg.ss/icm/vdir/
jnet.jar`
- `wrapper.classpath=/export/home/itg.ss/icm/vdir/
jsse.jar`
- `wrapper.classpath=/export/home/itg.ss/icm/vdir/
jcert.jar`

-
- 4** In the Aliases section of the *httpd.conf* file (located in the Apache *conf* directory—for example, *usr/local/apache1.3.12/conf*), add the following aliases:

- `Alias /icm/ "/export/home/itg.ss/icm/vdir/"`
- `Alias /icc/ "/export/home/itg.ss/icm/demos/icc/"`
- `Alias /icmadmin/ "/export/home/itg.ss/icm/admin/"`
- `Alias /cirs/ "/export/home/itg.ss/icm/admin/cirs"`

-
- 5** Enter the following command to gracefully stop and restart the system:
`init 6`

END OF STEPS



Solaris Reference

- Overview** This section contains information on the following Solaris-related topics:
- How to manually stop and start the Apache Web server
 - How to manually start the ICM process and control windows
 - How to identify and terminate processes related to *CentreVu* Internet Solutions
 - How to access control window functionality on remote systems

Manually stopping and starting the Apache Web server

You can manually stop and start the Apache Web server by doing the following:

-
- 1** Login as root.
-
- 2** In the Apache bin directory (for example, `/usr/local/apache1.3.12/bin/`):
 - Enter the following command to stop Apache: `apachectl stop`
 - Enter the following command to start Apache: `apachectl start`

END OF STEPS

Manually starting the ICM process and control windows

If necessary, you can manually start the ICM process and control windows by doing the following:

-
- 1** Login as root.
-
- 2** Enter `cd /export/home/itg.ss/icm/vdir`

-
- 3 Enter `./icm.sh` to start ICM.

TIP: If you start ICM by this method, then when you log off the ICM will automatically stop. To allow the ICM service to run even after you log off of the ICM server, start ICM from the `vdir` directory (such as `/export/home/itg.ss/icm/vdir`) with the following command:

```
nohup ./icm.sh < /dev/null > /dev/null
```

- 4 Enter `./ar.sh` to start Agent Router.
-

- 5 Enter `./icmUIon.sh` to start the ICM control window.
-

- 6 Enter `./arUIon.sh` to start the Agent Router control window.
-

END OF STEPS

Identifying and terminating *CentreVu* Internet Solutions processes

If necessary, you can identify and terminate a *CentreVu* Internet Solutions process by doing the following:

- 1 Obtain the identification number of the process. With the exception of a VMM process, you can obtain the process number by entering
`ps -ef | grep java`

The key to process names is as follows:

- `jcirtICM` process
- `jnetCIRS` process
- `ltjtapiaAgent Router` process

To obtain the identification number of a VMM process, enter
`ps ef | grep vmm`

- 2 Enter `kill process number`
-

END OF STEPS

Solaris remote controls

You can get ICM, Agent Router, and CIRS control window functionality through a text-based terminal session when logging in to remote Solaris systems by doing the following:

-
- 1** Connect to the remote Solaris server on which the software you wish to administer is installed. (Depending upon your contact center's configuration, all of the software may be on one server, or ICM may be on a different server from Agent Router, etcetera; connect to the appropriate server.)
-

- 2** Change directory to `/export/home/itg.ss/icm/vdir` (or the directory where `vdir` is if the software is not installed in the default installation directory).
-

- 3** Enter one of the following commands, depending on which control window you wish to access:

- `./texticm.sh` for ICM
- `./textar.sh` for Agent Router
- `./textcirs.sh` for CIRS

Result: The connection is established after a brief interval.

- 4** Enter `display commands` to see a list of available commands.
-

- 5** Administer the remote system as necessary.
-

- 6** Disconnect from the remote system when finished.

END OF STEPS



5 Install and uninstall the messaging software

Overview

Purpose The purpose of this information is to describe the procedures for installing and uninstalling the messaging component of *CentreVu* Internet Solutions (*Message Care*). 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 recommendations and installation instructions (5-3)
- Install the ICM software (5-32)
- Message Care installation procedures (5-33)
- Uninstall Message Care (5-51)
- Upgrade procedures for the messaging software (pre version 4.0) (5-56)

Important! The above information is presented in order of the recommended installation procedures for the *Message Care* software. To ensure that the *Message Care* 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 messaging system. This includes the Avaya 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 messaging 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 on which you will install the messaging software.

Make sure your system meets the following hardware and software prerequisites before installing *Microsoft SQL server 7.0/2000* and *Message Care*:

- 450 MHz or better *Pentium* II-based PC
- 256 MB of RAM
- 10 GB hard-disk drive (for the messaging software and the message databases)
- CD-ROM drive
- *Windows NT* 4.0 operating system with Service Pack 5, *Microsoft* Internet Information Services (IIS) Version 4.0 (with Option Pack 4), and *Microsoft* Internet Explorer 5.1
- Internet Call Manager (ICM) software. Refer to ICM Installation instructions (4-6) for installation information.
- *Java* Runtime Environment version 1.3 or later (normally this is installed with the ICM software)



Microsoft SQL Server recommendations and installation instructions

Overview

- Purpose** This section provides the recommendations and installation instructions for the *Microsoft* SQL Server software when used with *Message Care* Release 4.5.
- Contents** The following information is presented in the order in which it should be addressed to ensure later success when installing the *Message Care* software.
- Microsoft SQL Server supported versions and licensing (5-4)
 - Microsoft SQL Server prerequisites (5-5)
 - Install Microsoft SQL Server (5-6)
 - Verify the installation of Microsoft SQL Server (5-11)
 - Create message databases (5-14)
 - Create an SQL Server login ID and password (5-23)
 - Create ODBC data sources (5-26)
- Audience** The following information is for those who will be installing and setting up the *Microsoft* SQL-Server software for use with the message system.



Microsoft SQL Server supported versions and licensing

Versions supported The messaging software supports the following editions of *Microsoft SQL Server*:

- SQL Server 7.0 Standard Edition with Service Pack 1
- SQL Server 7.0 Enterprise Edition with Service Pack 1
- SQL Server 2000

Licensing environments supported The messaging software 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. Descriptions of the two deployments are described below:

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 prerequisites

About *Message Care 4.5* requires that the *Microsoft SQL Server* software reside on the same NT server as the messaging software. See Prerequisites (5-2) before installing *Microsoft SQL Server*.

Installation prerequisites Ensure that you have met the following installation prerequisites prior to installing the *Microsoft SQL Server* software:

- 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

Installation instructions

Important! Before installing the SQL Server software, ensure that you have met the system and installation prerequisites. For prerequisite information, see *Microsoft SQL Server prerequisites* (5-5).

To install *Microsoft SQL Server*, do the following:

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

Result: The SQL Server installation automatically begins and you are presented with the SQL Server 7.0 or SQL Server 2000 window (depending upon which version you are installing). If the installation does not automatically begin, select the *Autorun.exe* file from the SQL Server folder.

2

- If you are installing SQL Server 7.0: From the SQL Server 7.0 window, select *Install SQL Server 7.0 Components*.
- If you are installing SQL Server 2000: Select *SQL Server 2000 Components* from the SQL Server 2000 window.

Result: The *Install SQL Server 7.0 (or 2000) Components* window appears.

3

- If you are installing SQL Server 7.0: Select *Database Server - Standard Edition* from the *Install SQL Server 7.0 Components* window.
- If you are installing SQL Server 2000: Select *Install Database Server* from the SQL Server 2000 window.

Result: If you are installing SQL Server 7.0, the *Select Install Method* dialog box appears. If you are installing SQL Server 2000, the *Welcome* screen appears at this point; select the *Next* button to continue and the *Computer Name* dialog box appears.

4

- If you are installing SQL Server 7.0: from the Select Install Method dialog box, check the Local Install - Install to the Local Machine option, and then select the Next button.
- If you are installing SQL Server 2000: from the Computer Name dialog box, select the local computer option, and then select the Next button.

Result: If you are installing SQL Server 7.0, the Welcome screen appears at this point; select the Next button to continue and the SQL Server 7.0 Software License Agreement dialog box appears. If you are installing SQL Server 2000, the Installation Selection screen appears.

5

- If you are installing SQL Server 7.0: Read the license text and then select Yes to accept it. (If you select No, the installation terminates.)
- If you are installing SQL Server 2000: Select Create a new instance of SQL Server, or install client tools

Result: 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: If you are installing SQL Server 7.0, the Setup dialog box appears. If you are installing SQL Server 2000, The SQL Server 2000 Software License Agreement dialog box appears.

7

- If you are installing SQL Server 7.0: From the Setup dialog box, type your CD Key, and then select the **Next** button.
- If you are installing SQL Server 2000: Read the license text and then select **Yes** to accept it. (If you select **No**, the installation terminates.)

Result: If you are installing SQL Server 7.0, the Setup Type dialog box appears; go to step 10. If you are installing SQL Server 2000, the Installation Definition dialog box appears.

8 (SQL Server 2000 Installation only.) Select **Server and client tools** and then select the **Next** button.

Result: The Instance Name dialog box appears.

9 (SQL Server 2000 Installation only.) Select **Default** and then select the **Next** button.

Result: The Setup Type dialog box appears.

10 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, use 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.

11 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.

12 Select the Next button.

Result: The Choose Licensing Mode dialog box appears.

13 From the Choose Licensing Mode dialog box, do the following:

1. Select the default Per Server for option if you do not have a preference on the licensing mode.
2. Enter the number of licenses you require in the Per Server for text box. You will need licenses for the messaging software (five licenses required) and licenses for administrators, supervisors, and agents who will be accessing the system simultaneously.
3. (SQL Server 7.0 only) Select the Add Licenses button
4. Select the Continue button.

Result: The system installs the software. If you are installing SQL Server 2000, the installation stops on the Setup Complete dialog.

14 (SQL Server 2000 Installation only.) Select Yes, I want to restart my computer and then select the Finish button.

-
- 15** 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 (or Microsoft SQL Server)->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.

-
- 16** (SQL Server 7.0 only). Reboot the server.

-
- 17** (SQL Server 7.0 only). Follow the Installation Wizard instructions to install SQL Server 7.0 Service Pack 1.

END OF STEPS

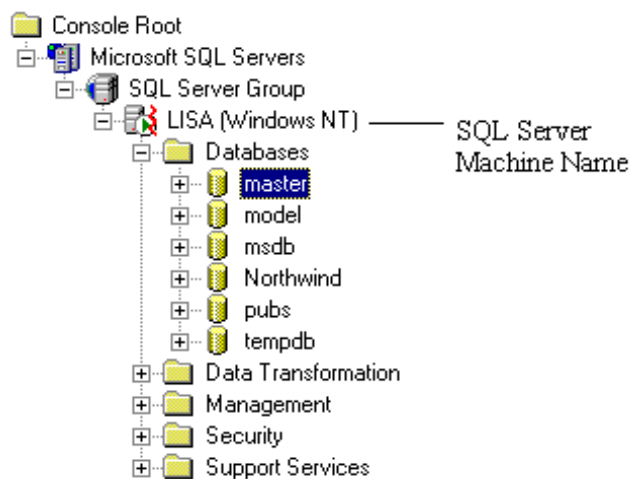


Verify the installation of Microsoft SQL Server

Instructions to verify installation

To verify the correct installation of *Microsoft SQL Server*, do the following:

- 1 Ensure that all SQL Server services are running. (If they are not, follow step 15 in “Install *Microsoft SQL Server*”).
- 2 Connect to the SQL Server by doing the following:
 1. From the Start button, select Programs->Microsoft SQL Server 7.0 (or Microsoft SQL Server)->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 (or Microsoft SQL Server)->Query Analyzer

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.

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`

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
- The correct version of the operating system
- 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 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 NT* and *Microsoft Windows* operating systems. Code page 1252 might be appropriate if you intend to use clients running *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 SQL \install directory)
 - *Errorlog* (located in the SQL \Log directory or where your database is installed)

END OF STEPS



Create message 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-related databases. The messaging software 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 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 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 on which the databases will reside
- The disk space already used on the disk partition on 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 (or Microsoft SQL Server)->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 (in SQL Server 2000, the file property information is located on the Data Files tab). Change this field to the desired location, if necessary.
- 5 In the Database files group, type 1 in the Initial size (MB) field.
- 6 In the File properties group, do the following in the order shown:
 - 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 in the order shown:
- 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** To open the MCAdmin Properties dialog box, right-click the MCAdmin database, and then select the Properties item.
-
- 13** Select the Options tab.
-
- 14** From the Settings group, select the Auto shrink check box and leave the defaults (Auto create statistics, Torn Page Detections, and Auto update statistics) checked.
-
- 15** Select the OK button.

E N D O F S T E P S

Create MCMessages database

To create the MCMessages database, do the following:

- 1 From the Start button, select Programs->Microsoft SQL Server 7.0 (or Microsoft SQL Server)->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 (in SQL Server 2000, the file property information is located on the Data Files tab) Change this field to the desired location, if necessary.
- 5 In the Database files group, type 100 in the Initial size (MB) field.
- 6 In the File properties group, do the following in the order shown:
 - Leave the Automatically grow file box checked.
 - In the File growth-> In megabytes option, type an appropriate incremental number of MB to 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 MCMessages 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). The messaging software 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 to 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 in the order shown:
 - 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** To open the MCMessages Properties dialog box, right-click the MCMessages database, and then select the Properties item.
 - 13** Select the Options tab.
 - 14** From the Settings group, select the Auto shrink check box, and leave the defaults (Auto create statistics, Torn Page Detections, 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 (or Microsoft SQL Server)->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 (in SQL Server 2000, the file property information is located on the Data Files tab). Change this field to the desired location, if necessary.
- 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 To open the MCArchive Properties dialog box, right-click the MCArchive database, and then select the Properties item.
 - 12 Select the Options tab.
 - 13 From the Settings group, select the Auto shrink check box and leave the defaults (Auto create statistics, Torn Page Detections, and Auto update statistics) checked.
 - 14 Select the OK button.
-

END OF STEPS

Modify the MCMessages capacity

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

After you have created the message databases, you need to modify the MCMessages database capacity in the *msgcare.ini* file located in the Message Care server `Winnt` directory. The messaging software 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 on 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 messaging software.

- 1 From the Start button, select Programs->Microsoft SQL Server 7.0 (or Microsoft SQL Server)->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.
-

- 14** For non US-English installations of the messaging software, perform the steps in Non US-English installations (5-24).
-

END OF STEPS

**Non US-English
installations**

Important! For non US-English installations, the default language for the *msgcare* SQL Server login needs to be changed to English. You must complete this before you can successfully archive message records. This is because the *msgcare* login created in localized SQL Server installations, by default, is associated with the localized language. This would cause the messaging archive program to fail due to the different date formats used in the various languages supported by the messaging software. To treat the date format in a consistent manner, the default language for the *msgcare* SQL Server login needs to be changed to English.

To treat the date format in a consistent manner, do the following:

- 1 Open the SQL Server's Enterprise Manager, and then select English as the Default Language in the General tab for "msgcare."
- 2 In the Security section of the specific SQL Server machine used, double click on the *msgcare* login.
- 3 From the General tab for *msgcare*, select English as the default language.

Selecting English as the default language will also make the SQL Sever use English in its internal logging facilities instead of the localized language. This would help support/service personnel troubleshoot any SQL Server related problems.

NOTE: You can create a separate SQL Server login with the local language as default to access/monitor the SQL Server (other settings must be identical to msgcare login to view the message databases).

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 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 the **Create an SQL Server login ID and password** (5-23).
-
- 11** Select the **Next** button.
-
- 12** Select the **Change the default database to check box**, select **MCAdmin** from the drop-down list box (leave the default **“Perform Translation for character data”** checked), and then select the **Next** button.
-
- 13** 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.

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 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 Create an SQL Server login ID and password (5-23).
 - 11** Select the Next button.
 - 12** Select the Change the default database to check box, select MCMessages from the drop-down list box (leave the defaults checked), and then select the Next button.
 - 13** 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 **Create an SQL Server login ID and password (5-23)**.
-

- 11** Select the **Next** button.
-

-
- 12** Select the **Change the default database to** check box, select **MCArchive** from the drop-down list box (keep the defaults checked), and then select the **Next** button.
-
- 13** 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 software

Installation instructions See [Install the software on a Windows server \(4-3\)](#) to install the ICM software.



Message Care installation procedures

Overview

Purpose This section contains information on how to install the *Message Care* 4.5 software. Before installing the messaging software, ensure that you have met the hardware and software prerequisites (see Prerequisites (5-2)).

You must have *Microsoft* SQL Server 7.0 with Service Pack 1 installed before you can install the messaging software.

Contents This section contains the following information:

- Install Message Care software (5-37)
- Run the Data Transformation Scripts (DTS) for empty databases (5-41)
- Run the post-installation procedures (5-44)
- Essential URLs (5-50)

Required installation information The following table lists the information that you are required to know before you install the *Message Care* 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\Avaya\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\Avaya\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 ICM software was installed.	C:\Program Files\Avaya\icm	
Distinct License Key Extension Number—this value is supplied with the messaging software and documentation.	None	
Distinct License Key Extension Key—this value is supplied with the messaging software and documentation.	None	

Performance recommendations

Recommendations for the messaging software are listed below:

- Virtual memory—the virtual memory setting on your *Message Care* server should be set to physical memory plus 12MB. Therefore, the virtual memory setting would be 268 MB for 256MB of physical RAM. In addition, set the virtual memory on the same drive running the messaging software 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, place the virtual memory and the database on two different physical drives.
- NT Application Performance Boost—to insure that sufficient system resources are available for the messaging software processes, set the NT Application Performance Boost to None. To set 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 (set up SQL to use dynamic memory allocation with a maximum of 128MB). If your system has more than 256MB of RAM, then setting the SQL Memory Allocation to half of the systems memory could improve SQL performance. For example, if your system has 512 MB of RAM, then set the SQL Memory Allocation to 256MB.

To set the SQL Memory Allocation to 128MB, do the following:

1. Open the *Microsoft* SQL Enterprise Manager.
 2. Right click on the Message Care server icon.
 3. 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 the messaging software since they can grow quite large.

To see if logging is enabled, do the following:

1. Open the Internet Service Manager, and then open the Message Care server.
2. Right click on the default Web Site, and then select the Properties item.
3. 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 NT File System (NTFS).

To see what type of file system your server is using, do the following:

1. Right-click the C: drive (on which Winnt is running), select Properties, and then select the General tab.
2. 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 the messaging software 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 software

- Before you begin** Before you install the messaging software, stop the IIS service.
- Installation procedures** To install the *Message Care* 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 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 the messaging software 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 messaging 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 the messaging software.

-
- 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 (5-33) 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 (5-33) 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 Avaya 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 next dialog box appears.

-
- 15** The dialog box gives you the option to install a shortcut icon on the desktop for easy access to the messaging software.

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

-
- 16** 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.

E N D O F S T E P S



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 SQL Server 7.0* software and *Message Care* software. If you must run the DTS after you have been using the messaging software, 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 in the order shown:
 - 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 in the order shown:
 - 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 in the order shown:

- 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.

END OF STEPS



Apply indexes

Instructions See [Apply the indexes \(5-60\)](#) 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 database access username and password.
3. Configure the message system.
4. Administer the message system.
5. Restart the message 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:

- mcsript
 - mcadmin
 - msgcare
-

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

Result: The mcsript 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 13 for the `mcadmin` and `mcreport` virtual directories.
-

END OF STEPS

Administer the message 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

Change SQL login/password

Important! If you need to change the SQL login/password information, then the messaging application must be shut down during an idle system period.

To change the SQL login/password, do the following:

- 1** Gracefully shut down the messaging software and the Maintenance Monitor as described in the procedures for Perform a graceful shutdown (12-25).
-
- 2** Change the SQL login/password used by the messaging application using the SQL Enterprise Manager.
-
- 3** Using the following Message Care web page: `http://{server_name}/msgcare/MCSetLogin.asp` identify the SQL login/password to be used by the messaging software.
-

4 Reboot the NT server.

5 Verification - If the Work Flow Manager is unable to access the database, it will present a pop-up dialog box on the server. The Work Flow Manager, once it has successfully accessed the database, will display, in its GUI, an entry indicating that it has started. This ready notification will be followed by product release information.

END OF STEPS

Configure the message system

To configure the messaging software, do the following:

1 If the ICM is not installed on the same server as the messaging software, 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 Solutions administration Web pages, you must perform one of the following configuration tasks:

- If the messaging software and ICM software are co-resident (running on the same server), then follow the steps that follow.
- If the messaging software and ICM software are not co-resident (running on different servers), then go to Step 4.

If the messaging software and ICM software are co-resident (running on the same server), then do the following:

1. Under the directory where ICM is installed (typically - `C:\Program Files\Avaya\icm`) create a new folder called `msgcare`.

2. Move the `{install_directory}\MessageCare\temp\MCAdministration.htm` file to the folder you just created (`C:\Program Files\Avaya\icm\msgcare`). Go to Step 5.

4 If the messaging software and ICM software are not co-resident (not running on the same server), do the following:

1. In the `C:\Program Files\Avaya\icm` folder on the ICM server, create a folder called `msgcare`.
2. From the *Message Care* server, copy the `{install_directory}\MessageCare\temp\MCAdministration.htm` file to the `C:\Program Files\Avaya\icm\msgcare` folder you just created on the ICM server.

3. Edit the `C:\Program Files\Avaya\icm\msgcare\MCAdministration.htm` file on the ICM server to link to the *Message Care* Server.

Edit the second line of the file (`<form name="formal" action="/mcadmin/MsgCareAdmin.asp" method="post">`)

with the following line (`<form name="formal" action="http://{your_Message_Care_server_domain}/mcadmin/MsgCareAdmin.asp" method="post">`)

4. Edit the `C:\Program Files\Avaya\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].value;`

5. Edit the
`{install_directory}\MessageCare\www\icmadmin\MsgCareAdmin.asp` file located on the *Message Care* server.

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

-
- 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. At line six in the *spell.inc* file, replace *mtpcs87-159.mt.lucent.com* with your Message Care Server's Host name or address.

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 your message system

To administer your message system, refer to Chapter 6, Administration.

Restart the system

After you have performed all post-installation procedures, restart your message system.



Potential problems when starting the application

Invalid SQL password	A pop-up dialog box appears on the <i>Message Care</i> server if upon system start up, the Work Flow Manager is unable to successfully log in to the SQL database. The Work Flow Manager will repeatedly attempt to connect to the database. The Mail Manager process will not begin mailbox polling until both the Work Flow Manager and Mail Manager processes can successfully log in to the SQL databases.
Call delivery delays after start up	Upon system start up, the Work Flow Manager process queries the database for all open messages (messages in the received, active, launched, or suspended state). Messages will not be delivered until the Work Flow Manager reviews the complete set of messages 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.
Required system parameters	Upon system start up, mailbox polling and message delivery will proceed only if you have administered the outbound SMTP mail server and the information necessary to generate system alarms. See <i>Administering the messaging software</i> (6-66).



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 (7-2) for a listing of localized URLs for the Agent Login Web pages.
Localized URLs for Supervisor Reports Page	Refer to Access message reports (10-8) for a listing of localized URLs for the Report Web pages.



Uninstall Message Care

Overview

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

Contents The following information is included in this section:

- Stop Microsoft Internet Information Server (IIS) (5-52)
- Perform a graceful shutdown of the messaging software (5-53)
- Uninstall the messaging software (5-54)
- Uninstall the Maintenance Monitor (5-55)



Stop Microsoft Internet Information Server (IIS)

Procedure To stop *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 the messaging software

Shut down the messaging software

To perform a graceful shut down of the messaging software, refer to Perform a graceful shutdown (12-25).



Uninstall the messaging software

Procedure To uninstall the messaging 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.

.....

E N D O F S T E P S



Uninstall the 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.

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

Reboot your system

After you have uninstalled the messaging software, reboot your system.



Upgrade procedures for the messaging software (pre version 4.0)

Overview

Purpose The purpose of this section is to explain how to upgrade the messaging software.

Summary of upgrade procedures A summary of the upgrade procedures follows. To upgrade the messaging software, 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* (12-25).
2. Back up your message files. See *Back up message files* (12-29).
3. Back up the message database.
4. Uninstall the messaging software. See *Uninstall the messaging software* (5-54).
5. Uninstall ICM. See *Uninstall the ICM software from a Windows server* (4-20)
6. Restart NT.
7. Upgrade NT, IIS and ICM. See *Upgrade NT and ICM* (5-57).
8. Install SQL 7.0. See *Install Microsoft SQL Server* (5-6).
9. Create the SQL databases. See *Create message databases* (5-14).
10. Create an SQL Server login ID and password. See *Create an SQL Server login ID and password* (5-23).
11. Define the ODBC data sources (DSNs). See *Create ODBC data sources* (5-26)
12. Install the messaging software. See *Install Message Care software* (5-37)
13. Run the DTS scripts for migrating the Access databases. See *Run the DTS for migrating the Microsoft Access databases* (5-58)
14. Run the Post-Install steps. See *Run the post-installation procedures* (5-44)
15. Restart the system.



Upgrade NT and ICM

Overview This section contains the following information:

- Upgrade NT (5-57)
- Upgrade ICM (5-57)

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 *Windows NT* and the version of the service pack that is running on the computer.

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

END OF STEPS

Upgrade ICM

- 1** Open the ICM window from Start->Programs->Avaya->Internet Call Manager software->Avaya Internet Call Manager.
-

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

- 3** Upgrade ICM 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 messaging software. If you do not perform this procedure, you will not be able to run the messaging software.

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 (pre 4.0) databases are in the location, *C:\Program Files\Avaya\MessageCare\database*. If this directory does not exist (if the messaging software 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 Apply the indexes (5-60).
 -
 - 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 811 for the Outbound and Workbench tables located in the MCmessage->Tables path.

END OF STEPS

Apply 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 the messaging software 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.

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

Append your Access database archives

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

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

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

Before you begin Your message 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 (12-34)*). The archive scripts rename and move your current MCArchive database and create a new (empty) MCArchive database to which you can append your Access databases.

**Append your message
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->Avaya->MessageCare->SQL Tools*.
.....
- 3** Type the following command: MArchive {database_name}

 {database_name} = the name of your message database

 For example, c:\Program Files\Avaya\MessageCare\SQL
 Tools>MArchive MCArchive1.mdb
.....
- 4** Repeat Step 3 for each message database that you want to append to the MCArchive database in SQL.

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



6 Administration

Overview

- Purpose** The purpose of this section is to inform you of the administration required for *CentreVu* Internet Solutions. After you have installed and connected all necessary components, you must administer *CentreVu* Internet Solutions 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 *CentreVu* Internet Solutions.
- Contents** The following information is contained in this chapter:
- Administering the Internet session software (6-3)
 - Administering the Voice over IP Gateways (6-33)
 - Administering the CTI (6-46)
 - Administering the DEFINITY ECS (6-49)
 - Administering the CentreVu Computer-Telephony software (6-64)
 - Administering the messaging software (6-66)

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

See the *Overview for DEFINITY ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server Issue 4(555233001)* document for more information about the IP600.



Administering the Internet session software

Overview

- Purpose** This section explains what must be administered for the Internet session software.
- Audience** This section is intended for system administrators and support personnel.
- Contents** The following administration items are provided:
- Administration prerequisites for Internet sessions (6-4)
 - Administration interface for Internet sessions (6-5)
 - Administer Internet session system parameters (6-6)
 - Administer agent parameters for Internet sessions (6-9)
 - Administer arenas (6-11)
 - Administer arena parameters (6-15)
 - Administer PagePops for Internet sessions (6-18)
 - Select another language (6-21)
 - Select a language to use in your arena (6-25)
 - Add a new language (6-27)
 - Gateway administration (6-29)
 - Administer VoIP Parameters (6-31)



Administration prerequisites for Internet sessions

Important! When you customize your contact center, you make modifications to the *phrases.txt* file, the *attributes.txt* file, and/or the template files (**su.txt*, **cl.txt*, **ap.txt*) that the software installs to the Default folder. Because it is important to preserve the original state of these files, this folder is read-only. You must copy the contents of the Default folder and change the attributes of each file to read/write before you can create your own arena and modify the sample phrases, attributes, and templates. For more information, see Administer arenas (6-11) and the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM.

- Prerequisites** Before you begin administration for the Internet session software, ensure the following:
- The ITG, IP600, and/or *DEFINITY* IP Solutions Voice over IP (VoIP) gateway hardware is installed
 - ICM server and *CentreVu* Computer-Telephony server are installed, connected, and functioning on the LAN.
 - The ICM application and the servlet engine are running on the ICM server.
 - A Web browser is available for administrative access.
 - You know all relevant IP addresses.



Administration interface for Internet sessions

Access to administration interface

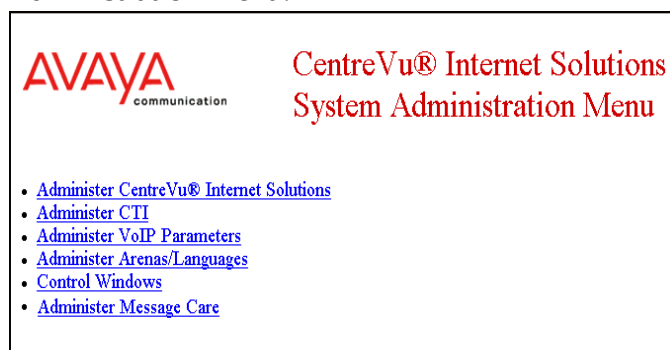
You administer the Internet session software through a main administration Web page. To access the main administration Web page, enter the page location in the browser window as follows:

`http://{ICM_server_name}/icmadmin`

The main administration Web page appears.

Illustration

The following is the *CentreVu* Internet Solutions 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.

NOTE: If you have the messaging software installed then the *Message Care* links will be visible.

Common characteristics of the administration Web pages

Each Web page provides the following buttons:

- Help—links to Help contents associated with the page
- Refresh—redispays the current page with any updated values
- Save—activates the changes you have made. Refresh the page after using this button to ensure that the displayed values are correct.



Administer Internet session system parameters

Overview The System Parameters Administration Web page allows administration that applies to the entire system.

Access to the System Parameters Web page

To access the Web page that allows administration for the system, do the following:

1. From the main administration Web page (http://{icm_server_name}/icmadmin), click on the *Administer CentreVu Internet Solutions* link.

A framed interface appears.

2. From the left frame, click on the *System Parameters* link located under the Default heading.

The System Parameters Administration Web page appears in the right frame.

System Parameters Administration interface

An illustration of the System Parameters Administration Web page follows:

Description	Value
ICM Server Domain Name (IP Address)	
ICM Server Internal IP Address	
Is the ICM Server using SSL?	☐ yes ☒ no
VoIP Connect Timeout	
Call Back Request Limit	
Enable Phantom Call for Text Chat?	☒ yes ☐ no
Phantom Extensions for Text Chat	
Chat Transcript Directory	
Chat Transcript Log Size (MB)	
Chat Transcript Field Delimiter	
Chat Transcript String Delimiter	

Click the Save button to save the above values.

WARNING: Administrative changes on this page will automatically take effect upon clicking the "Save" button!

Parameter descriptions for the system

You can administer the following parameters on the System Parameters 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. This field is populated with the ICM Server Domain Name you entered during installation.
ICM Server Internal Address	This field contains the same domain name or IP address as the previous field, unless your contact center uses Network Address Translation (NAT). In that case, this field should specify the server's internal address.
Is the ICM Server using SSL?	This field specifies whether the ICM server is using Secure Socket Layer (SSL). The default is No.
Callback Request Limit	This field contains the maximum number of outstanding scheduled callback requests allowed at any one time in the <i>callbacks.txt</i> file. The <i>callbacks.txt</i> file contains information about callback requests (for example, callback number, callback request time, and so forth). The Internet session software uses the <i>callbacks.txt</i> file to process callback requests that have not expired. The <i>callbacks.txt</i> file is also used in case of a system failure or graceful shutdown. When the system comes back up, the <i>callbacks.txt</i> file is used to process any callback requests that have not expired.
Enable Phantom Extensions for Text Chat?	This field allows you to specify whether phantom extensions will be used for text chat when possible. If you select Yes, you must provide administered phantom extensions in the next field.
Enable Phantom Extensions for Text Chat	This field enables you to list the extensions or hunt groups used for text chat. These must be extensions of stations administered without hardware (AWOH) on the <i>DEFINITY</i> ECS.
Chat Transcript Directory	This field contains the name of the directory in which the chat transcript files are stored. The default directory is: <i>icm\transcripts</i> . A value in this field is only necessary if the Enable Chat Transcript? parameter is set for an arena.
Chat Transcripts Log Size-MB	This field enables you to specify the size (in MB) of the chat transcripts log files (for example, <i>01-Jan-00-2.txt</i>). A value in this field is only necessary if the Enable Chat Transcript? parameter is set for an arena.

Parameter	Description
Chat Transcript Field Delimiter	This field enables you to separate your chat transcript data by field so that it can easily be imported into a database for analysis and generating reports. By default, each field is separated by a comma. A value in this field is only necessary if you are going to import the chat transcript into a database.
Chat Transcript String Delimiter	This field defines the character used to delimit strings in the chat transcript log so that it can easily be imported into a database. By default, the delimiter is a quotation mark. A value in this field is only necessary if you are going to import the chat transcript into a database.



Administer agent parameters for Internet sessions

Overview The Agent Parameters Administration Web page allows you to specify additional URL parameters that the system will pass to either the Call Answered (caller) URL or Caller Alerting URL. See the Web Guidelines documentation located on your CVuIS ICC Software CD-ROM for information about existing URL parameters that the system passes to these two URLs.

Access to agent parameter administration

To access the Agent Parameters Administration Web page, do the following:

1. From the main administration Web page (*http://{icm_server_name}/icmadmin*), click on the *Administer CentreVu Internet Solutions* link.
A framed interface appears.
2. From the left frame, click on the *Agent Parameters* link located under the arena for which you want to administer agent parameters (for example, Default, {your arena1}, {your arena2}, and so forth).

The Agent Parameters Administration Web page appears in the right frame.

Agent parameter administration interface

An illustration of the Agent Parameter Administration Web page follows:

Agent Parameters Administration
(default Arena)
Click the Refresh button to display updates.
Help Refresh

Add Agent Parameters
(Click the Save button to add arenas.)

Parameter

Save

Change or Delete AgentParameters
(Click the Save button to submit changes.)

Delete?	Parameter

Save

Add an agent parameter

To add an agent parameter, do the following:

1. Enter the agent parameter name in one of the text boxes located in the *Add Agent Parameters* frame. The agent parameter name can be up to 24 alphanumeric characters.
2. Click the Save button.

All agent parameter names you have added appear in the *Change or Delete Agent Parameter* frame.

To delete an agent parameter, do the following:

1. From the *Change or Delete Agent Parameter* frame, click the Yes option in the *Delete?* column for the agent parameter you want to delete.
2. Click the Save button.

To change an agent parameter, do the following:

1. From the *Change or Delete Agent Parameter* frame, highlight the agent parameter that you want to change.
2. Enter the new agent parameter name.
3. Click the Save button.



Administer arenas

About arenas

Arenas are a simple but powerful method for using a sundry of Java applets (agent and customer) and Web pages for different purposes. The "Arena" concept is based on the assumption that a single contact center may process sessions for several families of products or services, perhaps for different companies, perhaps in different languages. Each product, language, or company for which the contact center is managing Internet sessions can have its own custom-designed "arena." Each arena can have its own Web pages with a different look and feel from other arenas supported by the contact center as well as a different look and feel for each *Java* applet that supports the Web pages. For example, let us assume that your contact center is a service provider for three companies' Web sites (company 1 = arena1, company 2 = arena2, and company 3 = arena3). Arena1 sells tickets to concerts and other events, arena2 provides computing services, and arena3 is a bank. Each arena can have a customer Web page that is unique to its specific service or product. In addition, the *Java* applets (agent and customer) for each arena can also be specific to the particular product or service. Some of the customizable options that provide *Java* applet and Web page distinction are as follows:

- Language
- Appearance of applets (for example, company logo, fonts, and so forth)
- Frames
- PagePops
- Optional features—for example, telepointer, chat transcripts, scheduled callback, and so forth.

What happens when you add an arena

When you add an arena to the system, the Internet session software creates a directory structure (*icm\{new_arena\}*). Your arena and two new links (*Arena Parameters* and *Agent Parameters*) appear in the left frame of the *CentreVu* Internet Solutions System Administration Web page. With these two links, you can administer parameter values unique to the arena.

Access the Arena Administration Web page

To access the Arena Administration Web page, do the following:

1. From the main administration Web page (*http:// {icm_server_name}/icmadmin*), click on the *Administer Arena/Language* link.

The Arena/Language System Administration Web page appears.

2. Click on the *Administer Arenas* link

The Arena Administration Web page appears.

Arena administration interface

An illustration of the Arena Administration Web page follows:

The screenshot shows the 'Arena Administration' web page. At the top, it says 'Arena Administration' and 'Click the Refresh button to display updates.' Below this are 'Help' and 'Refresh' buttons. A navigation bar contains links: '[Arena Administration | Language Administration | Languages for Arena Administration | Arena/Language Administration Menu | System Administration Menu]'. The main content area is split into two panels. The left panel, titled 'Add Arenas' with the instruction '(Click the Save button to add arenas.)', contains a table with one header row 'Arena' and ten empty rows for data entry. A 'Save' button is at the bottom of this panel. The right panel, titled 'Change or Delete Arenas' with the instruction '(Click the Save button to submit changes.)', contains a 'Delete? Arena' button and a 'Save' button.

Add an arena to the system

To add an arena, do the following:

- 1 Enter the name of the arena in the *Add Arenas* frame. The name can be up to 24 alphanumeric characters.

- 2 Click the *Save* button.

Result: The new arena appears in the *Change or Delete Arenas* frame. Your arena and its associated administration Web pages (Arena Parameters and Agent Parameters) appear in the left frame of the *CentreVu* Internet Solutions System Administration Web page.

END OF STEPS

Delete an arena

To delete an arena, do the following:

- 1 Click the *Yes* option in the *Change and Delete Arenas* frame for the arena you want to remove.

- 2 Click the *Save* button.

END OF STEPS

Change an arena's name

To change an arena's name, do the following:

- 1 From the *Change and Delete Arenas* frame, highlight the arena name that you want to change.

- 2 Enter the new arena name.

- 3 Click the *Save* button.

END OF STEPS

Further customize your new arena

If you have administered different arena and agent parameter values (that is different from the default arena and agent parameter values) for your new arena, then you have customized your arena. However, you can customize your arena even further.

For example, you could do the following to further customize your arena:

- Add a language—adding a language to your arena enables you to administer PagePops unique for that language and also allows your applets to be displayed in that language.
To add a new language, you must first select that language for use in the system (if you did not select it during installation)see [Select another language \(6-21\)](#), and then add that language to your arenasee [Select a language to use in your arena \(6-25\)](#).
- Add optional features—there are a number of optional features available to you (chat transcripts, power browsing, telepointer, and so forth). For procedures on implementing optional features in your arenas, see the [Web Guidelines documentation](#).
- Change the appearance of your applets—you can customize the look of your applets by modifying your arena's template files. For procedures on how to customize your arena's applets, see the [Web Guidelines documentation](#).



Administer arena parameters

Overview The Arena Parameters Administration Web page allows you to administer specific parameters by arena. For more information about arenas, see [Arenas \(1-15\)](#).

Access to arena parameter administration

To access the Web page that allows parameter administration for arenas, do the following:

1. From the main administration Web page (http://{icm_server_name}/icmadmin), click on the *Administer CentreVu Internet Solutions* link.

A framed interface appears.

2. From the left frame, click on the *Arena Parameters* link located under the arena for which you want to administer arena parameters (for example, Default, {your arena1}, {your arena2}, and so forth).

The Arena Parameters Administration Web page appears in the right frame.

Arena parameter administration interface

The following example displays the Arena Parameter Administration Web page for the Default arena:

Arena Parameters Administration (default Arena)

Description	Value
Domain Base URL	
	Verify
Tunnel Servlet URL	
	Verify
Agent Must Tunnel?	☐ yes ☒ no
Enable Caller Audible?	☒ yes ☐ no
Enable CallBack?	☒ yes ☐ no
Enable Auto Reconnect?	☒ yes ☐ no
Enable Send Page for Caller?	☒ yes ☐ no
Display Timestamp?	☒ yes ☐ no
Enable Chat Transcript?	☒ yes ☐ no
Tunnel Timeout	30
Enable Agent Logout Button?	☒ yes ☐ no
Enable Agent Logout On Close?	☒ yes ☐ no
Prepend Digits for CallBack	12345678901234567890
Virtual Conference Password	*****
Browse Window URL	/icm/welcome.html
Help URL	/icm/cphelp.html

Click the Save button to save the above values.

WARNING: Administrative changes on this page will automatically take effect upon clicking the "Save" button!

Parameter description for arenas

You can administer the following parameters for each arena:

Parameter	Description
Domain Base URL	This field contains the domain and path (for example, <i>http://company.com/pops/</i>) where your PagePops reside. The contents of this field is prepended to the PagePop URL if the PagePop URL is a relative URL (that is, PagePop relative URLs become absolute URLs). This parameter is useful in that you don't have to enter the domain and path for each PagePop URL that you are administering. In a multi-domain environment, you could administer PagePops once in the Default arena, and then enter the domain and path in the Domain Base URL field for each arena. For example, arena1= <i>http://company.com/pops/arena/1</i> , arena2= <i>http://company.com/pops/arena2/</i> , and so forth.
Tunnel Servlet URL	This field contains the domain and path for the Tunnel Servlet. The default is <i>http://{icm_server_name}/servlet/TS</i> .
Agent Must Tunnel?	This field specifies whether the agent applet must always connect by tunneling. The default is No.
Enable Form Sharing?	This field controls the ability for agents and customers to collaboratively share the data entered into forms on a Web page. The default is Yes.
Enable Caller Audible?	This field specifies whether the caller-side audible chat indicator is enabled. The default is Yes.
Enable CallBack?	This field controls the ability for customers to request a telephone call from the contact center to a specified number. The default is Yes.
Enable Auto Reconnect?	This field allows you to enable or disable the Auto Reconnect feature. When the connection between the ICM and agent applet is lost, you can enable the system to automatically attempt to reestablish the connection. The system makes one attempt to reconnect the connection between the agent applet and the ICM.
Enable Send Site for Caller?	This field controls the ability for customers to use the Send Page button. The default is Yes.
Display Timestamp?	This field allows you to specify whether a timestamp displays on the agent's and customer's chat transcripts in the Text Transcript area.
Enable Chat Transcript?	This field allows you to enable/disable chat transcript logging.
Tunnel Timeout	This field allows you to enter the number of seconds the software will try to connect the caller applet through the TCP port (8102) before going to HTTP tunneling.
Enable Agent Logout Button?	This field enables you to enable or disable the Logout button on the Agent Control Window. The default is Yes (enabled).

Parameter	Description
Enable Agent Logout On Close?	This field enables you to turn off or turn on the automatic agent logout from the contact center if the agent connection to the ICM application on the ICM server is lost or dropped. Default is Yes.
Prepend digits for callback	This field specifies the digits that automatically appear in the callback dialog, such as 9 to access an outside line or 1+(country code) for an arena that primarily handles customers from a specific outside country. When making a callback, the agent can edit or delete these prepended digits before dialing.
Virtual Conference Password	This field contains the privileged password which allows presenters to set up a virtual conference.
Browse Window URL	This field must contain the URL of the Web page displayed to a customer 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	This field must contain the URL of the Web page displayed to the customer when the customer selects the Help button on the Caller Control Window applet. You can set this field as a parameter (helpURL) in the “Contact Us” Web page.



Administer PagePops for Internet sessions

Overview The PagePop Administration Web page allows administration of the URLs associated with Internet session progress or failure events. These are the Web pages or scripts used whenever a specific event occurs.

Access to PagePop administration

To access the Web page that allows parameter administration for PagePops, do the following:

1. From the main administration Web page (*http://{icm_server_name}/icmadmin*), click on the *Administer CentreVu Internet Solutions* link.
A framed interface appears.
2. From the left frame, locate the arena for which you want to administer PagePop parameters (for example, Default, {your arena1}, {your arena2}, and so forth).
3. From the arena's list of administration links, click on the language link for which you want to administer PagePops. If you do not see a language for which you want to administer PagePops, then it is likely that the language was not selected during installation or later through administration (see *Select another language (6-21)* for information about selecting languages).

The PagePop Administration Web page for the arena and language you selected appears in the right frame. For example, PagePop Administration (Default Arena - English)

PagePop administration interface

An illustration of the PagePop Administration Web page follows:

PagePop Administration (default Arena - English(US))

Description	Value
Incoming Call Queued URL	en-US/icc_queued.html
Call Answered (Agent) URL	en-US/icc_gotcaller.html
Call Answered (Caller) URL	en-US/icc_gotagent.html
Caller Alerting URL	en-US/pop_calleralert.html
Missing VDN Data URL	en-US/icc_novdn.html
Call Center Forced Disconnect URL	en-US/icc_isoff.html
Call Center Forced Busy URL	en-US/icc_isoff.html
Call Limit Reached URL	en-US/icc_noresources.html
PRI Call Limit URL	en-US/icc_ivlimit.html
Phantom Call Limit URL	en-US/icc_plimit.html
CallBack Confirmation URL	en-US/icc_goingtocb.html
CallBack Redirection URL	en-US/icc_callbackoff.html
Agent Idle URL	en-US/icc_agentidle.html
Agent Alerting URL	en-US/pop_agentalert.html
Out Of Service URL	en-US/icc_isoff.html
License Limit URL	en-US/icc_llimit.html

Click the Save button to save the above values.

WARNING: Administrative changes on this page will automatically take effect upon clicking the "Save" button!

Parameter description for PagePops

When administering PagePop URLs, the URLs can either be absolute URLs or relative URLs (contingent upon the Domain Base URL parameter—see Parameter description for arenas (6-16) for information about the Domain Base URL parameter). You can administer the following parameters on the PagePop Administration Web page:

Parameter	Description
Incoming Call Queued URL	This field must contain the URL of the Web page displayed to customers when they are placed in queue for the next available agent.
Call Answered (Agent) URL	This field must contain the URL of the Web page displayed to agents when they receive an incoming Internet session.
Call Answered (Caller) URL	This field must contain the URL of the Web page displayed to the customer when the session request is received by an agent.
Caller Alerting URL	This field contains the URL of the Web page displayed to a customer when the customer is alerted of a new session.
Missing VDN Data URL	This field must contain the URL of the Web page displayed to the customer when a session request is submitted but the VDN extension information is missing.

Parameter	Description
Call Center Forced Disconnect URL	This field must contain the URL of the Web page displayed to the customer 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 customer in the event that vector processing returns a forced busy.
Call Limit Reached URL	This field must contain the URL of the Web page displayed to the customer when the VoIP gateways are currently processing the maximum number of Internet voice sessions.
PRI Call Limit URL	This field must contain the URL of the Web page displayed to the customer when the Internet session request cannot be placed into the contact center due to insufficient PRI resources.
Phantom Call Limit URL	This field must contain the URL of the Web page displayed to the customer 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).
CallBack Confirmation URL	This field must contain the URL of the Web page displayed to the customer to confirm a request for callback.
CallBack Redirection URL	This field must contain the URL of the Web page displayed to a customer who requests a callback when the feature is disabled.
Agent Idle URL	This field must contain the URL of the Web page displayed to an agent who is logged in but not currently active on a session. If you have installed the messaging software only or the messaging and Internet session components, then you must use the agent idle URL (<i>idlepage.asp</i>) provided by the messaging software. See Important information about the Agent Idle URL parameter (6-80) for more information.
Agent Alerting URL	This field contains the URL of the Web page displayed to an agent when the agent is alerted of a new session. If you have installed the messaging software only or the messaging and Internet session software, then you must use the agent alerting URL (<i>mc_agentalert.asp</i>) provided by the messaging software.
Out Of Service URL	This field must contain the URL of the page displayed when you take the ICM out of service. If you have installed the messaging software only or the messaging and Internet session software, then you must use the out-of-service URL (<i>mc_isoff.asp</i>) provided by the messaging software.
License Limit URL	This field must contain the URL of the page displayed to the customer when the session attempt exceeds the number of simultaneous sessions for the requested media type.



Select another language

Overview During installation, you were prompted to select one or more of the languages for which the Internet session software provides translations. If you determine later that you want to add another language, you can do so through the Language Administration Web page.

Access the Language Administration Web page

To access the Language Administration Web page, do the following:

- 1 From the main administration Web page (*http://{icm_server_name}/icmadmin*), click on the *Administer Arena/Language* link.

Result: The Arena/Language System Administration Web page appears.

- 2 Click on the *Administer Languages* link.

Result: The Language Administration Web page appears.

END OF STEPS

Language Administration interface

An illustration of the Language Administration Web page follows:

Select a language to use with your system

To select one or more languages to use with your system, do the following:

- 1 Display the Language Administration Web page.
- 2 Select one or more of the languages listed in the *Add Languages* frame. To select all the languages in the list, hold down the **Shift** key, and then click the first and last language in the list. To select more than one language but not all languages, hold down the **Ctrl** key, and then select each language that you want to add.

- 3 Click the **Save** button.

Result: The selected language appears in the *Delete Languages* frame and a new default link ({language} for PagePops) appears in the left frame of the *CentreVu* Internet Solutions System Administration Web page.

If you select a language that is not translated (a language other than one of translated languages provided with the software) then you will receive a message informing you that you need to modify the *phrases.txt* file—go to Step 4 if you are required to modify the *phrases.txt* file; otherwise, go to Step 8.

- 4 Do the following for each language that you have selected:

Open the *phrases.txt* file (located in *icm\default\resources\{new language}\phrases.txt*), and translate all the strings (information to the right of the "=" sign) to the selected language (do not translate the Keys, the strings to the left of the "=" sign).

-
- 5** Do the following for each language that you have selected:

In the *phrases.txt* file (located in *icm\default\resources\{new language}\phrases.txt*), enter the new language under the # Language Names section. For example, if you are adding Dutch as the new language, you must add the following text under the # Language Names section: *nl= Dutch*. The # Language Names section is used to display messages such as "The caller's language is in Dutch" instead of "The caller's language is in *nl*."

-
- 6** If the language you have selected does not use the ISO 88591 character set, then you must add the following parameter in that language's *phrases.txt* file:

charSet={character set}

For example: *charSet=Big5*

Big5 is the character set for Traditional Chinese

-
- 7** Save and close each *phrases.txt* file that you have modified.

-
- 8** Optional: Administer the PagePops for the new language (located within the Default arena). For example, you may want your PagePops to be in the language that you just added; therefore, you will have to provide URLs for pages that are in that language. See *Administer PagePops for Internet sessions (6-18)* for instructions on administering PagePops.

END OF STEPS

Delete a language

When you delete a language, you are removing the language for use with your system. After a language is deleted, it will no longer be visible to you in the *Delete Languages* frame.

The *Delete Languages* frame provides the interface for removing a language from the list of languages in use. To remove a language, simply select the Yes option located in the Delete column for the language that you want to remove. The Language Administration Web page will not allow you to delete a language that is associated with an arena. To delete a language that is associated with an arena, you must use the Languages for Arenas Administration Web page (see [Select a language to use in your arena \(6-25\)](#)).

You can always re-select the language you removed by selecting it again from the *Add Language* frame.

Note that deleting a language using the Administration Web page just affects the administration Web pages. The {language} directory and associated files are not deleted.



Select a language to use in your arena

Overview Once you have selected the languages that you will use in your system (see [Select another language \(6-21\)](#) for procedures), you can then select one or more of those identified languages to use in your arenas. This is accomplished through the Languages for Arenas Administration Web page.

Access the Languages for Arenas Administration Web page

To access the Languages for Arenas Administration Web page, do the following:

1. From the main administration Web page (http://{icm_server_name}/icmadmin), click on the *Administer Arena/Language* link.
The Arena/Language System Administration Web page appears.
2. Click on the *Administer Languages for Arenas* link
The Languages for Arenas Administration Web page appears.

Languages for Arenas Administration interface

An illustration of the Languages for Arenas Administration Web page follows. In this illustration, English (US) and Spanish (Colombia) are the languages selected to use with the system. Whatever languages you selected during installation or added after installation are the languages that appear in the Languages for Arenas Administration Web page.

Languages for Arenas Administration	
Help Refresh	
[Arena Administration Language Administration Languages for Arena Administration] [Arena/Language Administration Menu System Administration Menu]	
Administer Languages for Arenas (Click the Save button to submit changes.)	
Arena	Languages
Arena1	☒ English(US) ☒ French
Arena2	☐ English(US) ☒ French
Save	

Select a language for your arena

To select a language for your arena, click in the language's checkbox for that arena, and then click the Save button.

Remove a language from your arena

To remove a language from your arena, deselect the language's checkbox for that arena, and then click the Save button.



Add a new language

Overview The real-time software provides the following languages that you can select from the Add Languages list in the Language Administration Web page:

- Ten languages that are already translated
- A number of other languages for which you must provide translations

Although the Internet session software provides a number of languages to choose from, the language you want to use may not be on the list. If the language that you want to use does not appear on the list, then you must add it.

Add a new language to the list

To add a new language to the list, do the following:

1 Open the *languages.cfg* file located in the *icm\admin* folder.

2 Edit the *languages.cfg* file by adding the following:

{language name=language code}

For example, Dutch=nl

The *languages.cfg* file lists the languages that you are using in alphabetical order. For quick reference, you may want to keep this order when adding new languages to the file.

For information about language and country codes, use the following URLs:

- <http://www.ics.uci.edu/pub/ietf/http/related/iso639.txt>
- http://www.chemie.fu-berlin.de/diverse/doc/ISO_3166.html

3 Save and close the *languages.cfg* file.

4 Stop and then restart the servlet engine (JRun or Tomcat) service.

-
- 5** Display the Language Administration Web page.

Result: The new language appears in the Add Languages list.

- 6** Select the new language for use. See [Select a language to use with your system \(6-22\)](#) for instructions.

END OF STEPS



Gateway administration

Overview The Administer Gateways Web page, along with the administration you perform on the gateway itself (see [Administering the Voice over IP Gateways \(6-33\)](#)), enables you to configure your VoIP gateways. (To administer VoIP Parameters, see [Administer VoIP Parameters \(6-31\)](#).)

Access the Gateway Administration Web page

From the main administration Web page (http://{icm_server_name}/icmadmin), click on the Administer VoIP Parameters link.

The VoIP Administration Web page appears. Click on Administer Gateways in the left frame.

Gateway administration interface

An illustration of the Gateway Administration Web page follows:

Gateway Administration

Click the Refresh button to display updates.

You must stop the ICM server and then restart it before your changes take effect.

Help
Refresh

Add Gateways

(Click the Save button to add gateways.)

IP Address or Domain Name	Port	ITG Gateway?	Simult. VOIP Calls
		☐	
		☐	
		☐	
		☐	
		☐	

Save

Change or Delete Gateways

(Click the Save button to submit changes.)

Delete?	IP Address or Domain Name	Port	ITG Gateway?	Simult. VOIP Calls
☐			☐	

Save

Administer your gateways

Important! You must administer at least one gateway if your contact center uses the Internet voice media type.

The Gateway Administration Web page allows you to do the following:

- Add gateways—to add a gateway, use the *Add Gateway* frame. When you have finished entering values for the new gateway, click the **Save** button.
- Change gateway values—to change a gateway's values after you have saved original gateway information, use the *Change or Delete Gateways* frame. When you have finished changing values, click the **Save** button.
- Delete gateways—to delete a gateway from the system, use the *Change or Delete Gateways* frame. Click the **Yes** option in the *Delete?* column for the gateway that you want to remove, and then click the **Save** button.

Gateway parameter descriptions

You can administer the following gateway parameters:

Parameter	Description
IP Address or Domain Name (Required)	This field contains the IP address or domain name of the VoIP gateway. For a <i>DEFINITY</i> IP Solutions-based gateway, use the IP address of the associated C-LAN board. If your contact center uses the Avaya Web Voice Client (WVC), you can administer multiple IP signaling groups on the same C-LAN circuit pack; multiple groups on the same C-LAN have the same IP address but different port numbers.
Port	This field contains the port number that the gateway uses to connect to the VoIP client. The default is 1720 (this is the only port usable by <i>Microsoft NetMeeting</i>). If your contact center uses the WVC, you can administer multiple IP signaling groups on the same C-LAN circuit pack as long as each group has a unique port number; valid WVC port numbers are 1720 and any value above 5000.
ITG Gateway?	This field indicates whether the device is an ITG or another type of gateway.
Simult. VoIP Calls	This field contains the number of simultaneous VoIP calls that the gateway can handle. This field is valid only if the gateway is <i>not</i> an ITG. If you enter a value for an ITG, the system ignores it.
Delete?	This field allows you to delete a gateway from the system. When you select Yes , the real-time software deletes the gateway from the system.



Administer VoIP Parameters

Overview The VoIP Parameter Administration Web page allows you to administer parameters relating to the customer-side Internet voice clients. (To administer VoIP Gateways, see [Gateway administration \(6-29\)](#).)

Access the VoIP Parameter Administration Web page

To access the VoIP Parameter Administration Web page, click on the *Administer VoIP Parameters* link from the main administration Web page (http://{icm_server_name}/icmadmin).

Illustration

An illustration of the VoIP Parameter Administration Web page follows:

Avaya VoIP Parameter Administration

Description	Value
Use Avaya Web Voice Client?	☒ yes ☐ no
Avaya Voice Media Manager IP Address	
Avaya Voice Media Manager Port	8120
Telephony App URL	Verify
VoIP Connect Timeout	
Minimum UDP port	60000
Maximum UDP port	60100

Click the Save button to save the above values.

WARNING: Administrative changes on this page will automatically take effect upon clicking the "Save" button!

To change the debug options for the Avaya Voice Media Manager, click on the desired option:

[Normal Logging](#) [Debug Logging](#)

Parameter description for the VoIP Parameter Administration Web page

You can administer the following parameters on the VoIP Parameter Administration Web page:

Parameter	Description
Use Avaya Web Voice Client?	This field indicates whether the contact center is using the Avaya WVC (Yes) or <i>Microsoft NetMeeting</i> (No.) After changing this field, you must stop and then restart the ICM server. <i>Note:</i> The installation process automatically sets this field to Yes if you install the Voice Media Manager (VMM) software on the same server as the ICM; otherwise you must manually set this field to Yes.
Avaya Voice Media Manager IP Address	This field specifies the IP address of the Avaya VMM server, if applicable.
Avaya Voice Media Manager Port	This field specifies the port number for VMM traffic, if applicable. The default is 8120.
Telephony App URL	This field specifies the telephony application to be used if <i>Microsoft NetMeeting</i> is the voice client. The default is <code>http://{icm_server_name}/servlet/WT/nmit</code>
VoIP Connect Timeout	This field contains the number of seconds the system will wait while placing an Internet voice session before switching to a text chat session. When the system begins to launch an Internet voice session, specific events occur to connect the session. If these events take more time to complete than what is specified in the VoIP Connect Timeout parameter, then the session switches to text chat. The system default for the VoIP Connect Timeout is 30 seconds. Thirty seconds is generally an acceptable time to wait for an Internet voice session to launch. However, if you are experiencing problems with Internet voice session switching to text chat sessions, then you may need to increase the VoIP Connect Timeout value.
Minimum UDP Port	This field specifies the minimum UDP port number. The default is 60000.
Maximum UDP Port	This field specifies the maximum UDP port number. The default is 60100.



Administering the Voice over IP Gateways

Overview

- Purpose** This section explains how to administer the *CentreVu* Internet Solutions VoIP gateways.
- Audience** This section is intended for system administrators and anyone involved in administering VoIP gateways for *CentreVu* Internet Solutions.
- Contents** This section contains the following information:
- Administering the ITG (6-34)
 - Administering the Avaya IP600 (6-35)
 - Administering DEFINITY IP Solutions (6-44)



Administering the ITG

See the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* for information on administering the Internet Telephony Gateway.



Administering the Avaya IP600

Before you begin

These instructions assume the following:

- The IP600 is already connected to the *DEFINITY* ECS
- You are able to access the administration screens for the IP600
- The *CentreVu* Internet Solutions software is installed and operating properly

Multiplying VoIP processing capacity

If your contact center uses the Avaya Web Voice Client (WVC), then one C-LAN circuit pack can handle multiple IP signaling groups for Voice over IP.

If you wish to take advantage of this feature, then you must:

1. Follow steps 1012 of the “IP 600 Hardware Administration” section for each IP signaling group you wish to create.
2. Specify each group as a separate gateway (with the same IP address/domain name as the other groups on the same C-LAN but a unique port number) in the “IP600 Software Administration” section.

Reference

For more information, see *Installation and Upgrade for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4 (555233109)* and *Maintenance for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4 (555233111)*.

Procedures

Use the following procedures to administer the IP600:

- IP600 Hardware Administration (6-36)
- IP600 Software Administration (6-43)

**IP600 Hardware
Administration**

- 1** Access the IP600 through a terminal emulation program.

- 2** Define options by doing the following:
 1. Enter `change system-parameters customer` option to access the Optional Features form.
 2. Change the following fields:
 - Maximum ports to `500`
 - Maximum Administered IP Trunks to the number of trunks purchased
 3. Go to page 3 of the Optional Features form.
 4. Change the following fields:
 - H.323 Trunks? to `y`
 - ISDN-PRI to `y`
 5. Go to page 4 of the Optional Features form.
 6. Change the Private Networking field to `y`.
 7. Select F3 to submit the changes.

- 3** Create a dialplan by doing the following:
 1. Enter `change dialplan` to access the Dial Plan Record form.
 2. In the First Digit Table, at the intersection of First Digit=1, Length=4, enter `extension`
 3. In the First Digit Table, at the intersection of First Digit=7, Length=3, enter `dac`
 4. In the First Digit Table, at the intersection of First Digit=8, Length=1, enter `fac`
 5. Select F3 to submit the changes.

-
- 4** Define feature access codes by doing the following:
1. Enter `change-feature-access-codes` to access the Feature Access Codes form.
 2. Change the Auto Alternate Routing (AAR) Access Code field to 8
 3. Select F3 to submit the changes.
-
- 5** Define the network region by doing the following:
1. Enter `change ip-network-region 1` to access the IP Network Region form.
 2. Change the following fields:
 - Codec Set to 1
 - UDP Port Range Min to the proper value for your firewall
 - UDP Port Range Max to the proper value for your firewall
 3. Select F3 to submit the changes.
-
- 6** Define the codec set by doing the following:
1. Enter `change ip-codec-set 1` to access the IP Codec Set form.
 2. Change the following fields:
 - Audio Codec to G.7235.3K
 - Silence Suppression to y
 - Frames Per Pkt to 1
 - Packet Size (ms) to 30
 3. Select F3 to submit the changes.
-
- 7** Assign node names by doing the following:
1. Enter `change node-names ip` to access the IP Node Names form.
 2. Enter a unique name and the IP address for each C-LAN and IP Media Processor card.
 3. Select F3 to submit the changes.
-

8 Define IP interfaces by doing the following:

1. Enter `change ip-interfaces` to access the IP Interfaces form.
 2. For each C-LAN and IP Media Processor card, change the following fields:
 - Enable Eth Pt to `y`
 - Type to either `C-LAN` or `MedPro`
 - Slot to the physical slot location of the circuit pack
 - Node Name to the unique name you administered for this card in the previous step
 - Gateway Address to the IP address of the gateway interface
 - Net Rgn to `1`
 3. Select F3 to submit the changes.
-

9 For each C-LAN circuit pack, establish a link to the LAN through Ethernet by doing the following:

1. Enter `add data-module next` to access the Data Module form.
2. Change the following fields:
 - Type to `ethernet`
 - Port to port 17 on the C-LAN circuit pack (the value in field should be {C-LAN physical slot}+17, such as `a0817` for a C-LAN residing in slot `a08`).
 - Link to a value between 125 not currently assigned on the switch
3. Select F3 to submit the changes.

10 Create an IP Signaling Group by doing the following:

1. Enter `add signaling-group` next to open the Signaling Group form.
2. Change the following fields:
 - Group Type to `h.323`
 - Near-end Node Name to the node name of the C-LAN IP interface
 - Near-end Listening Port to either `1720` (the only allowable value if your contact center uses *Microsoft NetMeeting* as the voice client) or to `1720` or a value above `5000` (if your contact center uses the Avaya Web Voice Client). Make a note of this value because you must also enter it in the *CentreVu* Internet Solutions Gateway Administration Web page (see step 2 of “Software administration”).
3. Make a note of the new IP Signaling Group's number (in the upper left of the form). You will use this when you assign ports to the IP trunk group.
4. Select F3 to submit the changes.

11 Create an IP Trunk Group by doing the following:

1. Enter `add trunk-group` next to access the Trunk Group form.
2. Change the following fields:
 - Group Name to `IP Trunk`
 - TAC (Trunk Access Code) to `701`
 - Carrier Medium to `IP`
 - Service Type to `Tie`
3. Make note of the new IP trunk group's number (in the upper left of the form). You will use this in step 12 to update the IP signaling group.
4. Go to page 3 of the Trunk Group form.

5. Change the following fields:
 - Service Feature to Tie
 - Insert to the Auto Alternate Routing (AAR) feature access code (if you wish to force all incoming calls on this trunk to use AAR)
 6. Go to page 4 of the Trunk Group form.
 7. For each port you wish to add (up to 31), change the following fields:
 - Port to IP
 - Sig Grp to the number of the Signaling Group that you created in step 10.
 8. Make note of how many ports you added. This is the maximum number of simultaneous VoIP calls that this trunk will be able to handle.
 9. Select F3 to submit the changes.
-

12 Update the IP Signaling Group by doing the following:

1. Enter `change signaling group n` where `n` is the number of the IP signaling group that you created in step 10.
 2. Change the Trunk Group for Channel Selection field to the number of the IP trunk group that you created in step 11.
-

13 Administer each DS1 by doing the following:

1. Enter `add ds1 slot` where `slot` is the physical location of the DS1 circuit pack. This accesses the DS1 Circuit Pack form.
2. Change the following fields:
 - Bit Rate to either `1.544` (for T1) or `2.048` (for E1)
 - Line Coding to either `b8zs` (for T1) or `hdb3` (for E1)
 - Signaling Mode to `isdn-pri`
 - Connect to `pbx`
 - Interface to `user`
 - CrC to either `n` (for T1) or `y` (for E1)

14 Create a PRI Signaling Group by doing the following:

1. Enter `add signaling-group` next to access the Signaling Group form.
 2. Change the following fields:
 - Group Type to `isdn-pri`
 - Primary D-Channel to either DS1 port 24 (for T1) or DS1 port 16 (for E1) the value in field should be {DS1 slot}+port number, such as `a0816` for a circuit pack residing in slot `a08` using T1
 3. Make note of the new signaling group's number (in the upper-left corner of the form). You will use this when you assign ports to the PRI trunk group.
 4. Select F3 to submit the changes.
-

15 Create a PRI Trunk Group by doing the following:

1. Enter `add trunk-group` next to access the Trunk Group form.
2. Change the following fields:
 - Group Name to either `T1` or `E1`
 - TAC to `702`
 - Carrier Medium to `PRI/BRI`
 - Service Type to `Tie`
3. Make note of the new trunk group's number (in the upper left of the form). You will use this in step 16 to update the PRI signaling group.
4. Go to page 4 of the Trunk Group form.
5. For each port, change the following fields:
 - Port to {DS1 slot}+{port number}—for example, if the DS1 is in slot `a08`, and the port number is 4, then enter `a0804`
 - Sig Grp to the number of the PRI signaling group that you created in step 14.
6. Select F3 to submit the changes.

16 Update the PRI signaling group by doing the following:

1. Enter `change-signaling-group-n` where `n` is the number of the PRI signaling group that you created in step 14.
 2. Change the Trunk Group for Channel Selection field to the number of the PRI trunk group that you created in step 15.
 3. Select F3 to submit the changes.
-

17 Define Class of Restriction 1 by doing the following:

1. Enter `change cor 1` to access the Class of Restriction form.
 2. Change the following fields:
 - FRL to `Ø`
 - Calling Party Restriction to `none`
 - Called Party Restriction to `none`
 3. Select F3 to submit the changes.
-

18 Define AAR analysis by doing the following:

1. Enter `change aar analysis 1` to access the AAR Digit Analysis Table.
2. Change the following fields:
 - Dialed String to your contact center's AAR VDN
 - Total Min to the length of the VDN
 - Total Max to (length of the VDN +7)
 - Route Pattern to `2` (you will create this routing pattern in step 19).
 - Call Type to `aar`
3. Select F3 to submit the changes.

-
- 19** Define the Routing Pattern by doing the following:
1. Enter change route-pattern 2 to access the Routing Pattern form.
 2. Change the following fields:
 - Grp. No. to the number of the PRI trunk group that you created in step 15.
 - FRL to Ø
 3. Select F3 to submit the changes.

END OF STEPS

IP600 Software Administration

-
- 1** Access the *CentreVu* Internet Solutions Gateway Administration Web page. (For more information, see Gateway administration (6-29).)
-
- 2** For each IP signaling group, specify the following in the Add Gateways frame:
- IP address or domain name of the C-LAN circuit pack
 - Signaling port number. The value you specify here must match the value you entered in the Near-end Signaling Port field when you created the signaling group in step 10. (1720 is the only port number used by *Microsoft NetMeeting*. You may only administer multiple IP signaling groups on the same C-LAN circuit pack if your contact center uses the Avaya Web Voice Client.)
-
- 3** Enter the maximum number of simultaneous VoIP sessions supported by the IP signaling group. This equals the number of ports you administered for the group.
-
- 4** Ensure that the associated ITG Gateway? button is not checked.
-
- 5** Click the Save button in the Add Gateways frame.

END OF STEPS



Administering DEFINITY IP Solutions

Before you begin

The *DEFINITY* IP Solutions gateway is a combination of a C-LAN circuit pack and an IP Media Processor circuit pack residing within the *DEFINITY* ECS.

These instructions assume the following:

- The required circuit packs are already physically installed in the *DEFINITY* ECS
- You are able to access the administration screens of the *DEFINITY* ECS
- The *CentreVu* Internet Solutions software is installed and operating properly

Multiplying VoIP processing capacity

If your contact center uses the Avaya Web Voice Client (WVC), then one C-LAN circuit pack can handle multiple IP signaling groups for Voice over IP.

If you wish to take advantage of this feature, then you must:

1. Follow steps 1012 of the “IP 600 Hardware Administration” section for each IP signaling group you wish to create.
2. Specify each group as a separate gateway (with the same IP address/domain name as the other groups on the same C-LAN but a unique port number) in the “IP600 Software Administration” section.

Reference

For more information, see *DEFINITY® Enterprise Communication Server Release 9 Administration for Network Connectivity, Issue 2(555233204)*.

**DEFINITY IP Solutions
Administration**

To administer *DEFINITY* IP Solutions as a VoIP gateway, do the following:

-
- 1** Follow step 2 and steps 512 in IP600 Hardware Administration (6-36).
.....
- 2** Follow all of the steps in IP600 Software Administration (6-43).

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



Administering the CTI

Overview

Purpose 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.



Administer the CTI

Access the CTI Administration Web page

To access the CTI Administration Web page click on the *Administer CTI* link from the main administration Web page (http://{icm_server_name}/icmadmin).

Illustration

An illustration of the CTI Administration Web page follows:

Update Tserver'. At the bottom are 'Help' and 'Refresh' buttons."/>

CTI Administration

Description	Value
CTI IP Address	
Telephony Server IP Address	
Telephony Server Login ID	
Telephony Server Password	
Telephony Server Identifier	
Monitored Hunt Groups	

Click the Save button to save the above values.

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

To perform the Update Tserver Admin command remotely, click on the following link: [Update Tserver](#)

Parameter description for the CTI Administration Web page

You can administer the following parameters on the CTI Administration Web page:

Parameter	Description
CTI IP Address (required field)	This field contains the IP address or the network name of the server where CTI is installed.
Telephony Server IP Address (required field)	This field contains 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 contains a valid <i>CentreVu</i> Computer-Telephony server login-ID to be used by the CTI process. If you change this field, you must restart the <i>CentreVu</i> Computer-Telephony server.

Parameter	Description
Telephony Server Password (required field)	This field contains a valid <i>CentreVu</i> Computer-Telephony server password (associated with the login-ID) to be used by the CTI process. 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 Agent Router Control Window \(12-16\)](#) for a description of this command.)

For information about updating devices, see [Updating devices in the CentreVu Computer-Telephony server \(12-18\)](#).



Administering the DEFINITY ECS

Overview

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

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

- Direct Agent Calling (DAC) (required) (6-50)
- Class of Restrictions (COR) (6-51)
- ACD translations for Internet sessions (6-53)
- ACD translations for message calls (6-59)

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

References The following list represents documents that contain information relevant to *CentreVu* Internet Solutions. 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)



Direct Agent Calling (DAC) (required)

Direct Agent Calling (DAC) (required)

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 Internet sessions use Direct Agent Calling

The Internet session software uses DACs to allow customers to select a specific agent when requesting a session.

For more information about the Direct Agent Calling feature, contact the Avaya Customer Care Center at 800-242-2121.

How messages use Direct Agent Calling

The messaging 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. A DAC will not abandon due to an impatient message customer (because there is no customer on the other end of a message) and should not be routed to *AUDIX*.
- Internet sessions may be administered to cover to a voice mail box, while messages should never be sent to voice mail. Please refer to the Vectors (2-38) for sample vectors that you can use to provide different agent coverage for Internet sessions versus messages.
- Supporting adjunct routing by passing ASAI-provided digits enables the messaging 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.



Class of Restrictions (COR)

Defining The Class of Restriction (COR) on the *DEFINITY* ECS should set the Direct Agent Calling Field to “y” for stations administered for the messaging software. This directs the *DEFINITY* ECS to treat sessions 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 (2-44) section.



Multiple Call Handling for a multi-session environment

Defining The multi-session environment enables agents to conduct multiple Internet sessions simultaneously. To enable the multi-session feature, you must set the Multiple Call Handling feature on the *DEFINITY* ECS. The Multiple Call Handling feature allows an agent to receive an Automatic Call Distribution call (ACD) while other types of sessions are alerting, active, or held at the station. This feature is administered on the Hunt Group form.

Important! If you do not wish to use the multi-session feature, the Multiple Call Handling feature on the *DEFINITY* ECS must be set to NONE to allow only one session. Set this for the Hunt Group that is associated with an Internet skill.



ACD translations for Internet sessions

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

Important! When adding your own VDNs, ensure that they do not exceed seven digits.

Real-time ACD translations The *DEFINITY* ECS ACD standard translations for Internet sessions 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 (if your contact center uses this access type), and the third is for callback. A MACS engineer obtains necessary extensions from you.
- Two standard vectors. The first vector is for Internet voice (if your contact center uses this access type). This vector queues the session 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 session to a certain skill. A MACS engineer obtains these vector numbers from you.

You are responsible for translating Internet skills, Expert Agent IDs, and agent telephones. Avaya personnel can provide this design work, as well as enhanced vector designs, as part of the Call Center Application Integration Avaya Professional Services offer. Call your account executive or Avaya Professional Services for details.

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

“Wait with Music” vector step

Do not use the “wait with music” vector step. It would add unnecessary processor usage to the customer's PC and traffic to the Internet circuit.

“Converse” vector step

Do not use the “converse” vector step. It is incompatible with *CentreVu* Internet Solutions functionality.

Digit collection

Do not use digit collection in Internet session vectors. There is currently no method to pass Dual Tone Multi Frequency (DTMF) tones (touchtones) across the Internet; therefore, there are no digits to collect.

VDN of Origin Announcements (VOAs)

VDN of Origin Announcements (VOAs) are strongly recommended. When an agent receives a text chat Internet session, 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 the incoming session's media type is to note the VDN name on the terminal display. Agents' class of service must be set to receive VOAs.

Vectors for text chat and callback calls

We recommend that you use a different vector for text chat sessions and callbacks than for Internet voice sessions. The Internet voice session vector can provide in-queue announcements, which are unnecessary for text chat and callbacks. In addition, the initial setup delay for *Microsoft NetMeeting* requires a unique strategy to be used in the voice session vector (see Voice call vector strategy (6-54)); that strategy is not needed for text chats or callbacks. Finally, Internet voice sessions can be routed to a voice mail box, whereas text chat sessions and callbacks cannot.

Voice call vector strategy

To provide the best experience to the customer, write vectors to answer each Internet voice session with an announcement that does not exceed 5 seconds. (This is a “null” announcement 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 session, the agent can begin speaking with the customer.

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 the customer requests an Internet voice session, 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 session and the time when the agent can be heard by the customer.
- If a time-in-queue announcement is used, the customer does not hear the first 5 seconds of the announcement.

ISDN-PRI trunk group (required)

If your contact center uses 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.

An IP600 can also connect to the *DEFINITY* ECS by way of an ISDN-PRI trunk group.

ISDN-PRI security

You must address ISDN-PRI trunk group security. Because the extension number used to launch an Internet session 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 your contact center's security. Therefore, the ISDN-PRI trunks must be restricted from placing outbound calls. Unless so restricted, the `vdn_ext` parameter submitted by a customer'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 Internet sessions (such as individual agent stations, non-Internet VDNs, and so on).

Methods to secure the ISDN-PRI trunk group

There are two mutually supporting methods to secure an ISDN-PRI trunk group:

- within the gateway, denying fraudulent sessions before they are placed to the *DEFINITY* ECS.
- within the *DEFINITY* ECS, denying sessions to locations other than those specified as valid endpoints.

How to secure the ISDN-PRI trunk group

The *DEFINITY* ECS is secured using Classes of Restriction (CORs) to restrict destinations from the gateway trunk group. The COR for this trunk group specifies, among other things, what connections 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) connections and you can restrict the ISDN-PRI trunk group to connect only to a resource with a COR that is used uniquely for Internet destinations.

Example

As an example, the ISDN-PRI trunk group to the gateway could be assigned a COR of 49, which is outward restricted, and limited to only connecting to 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 session comes across the ISDN-PRI trunk group destined for any other extension, that session is denied by the *DEFINITY* ECS (assuming that the destination extension is assigned a COR other than 48). The permissions assigned to COR 48 should reflect the security that the contact center would normally assign to VDNs.

Naturally, as Internet sessions are blended with telephone calls, the CORs discussed above may need to be modified to reflect all the requirements of the contact 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).

Service Observing

Service Observing allows a specified user, such as a supervisor, to observe agent and customer 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 customer whenever their session 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 customer transactions without being heard, 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 customer transactions.

How to use Service Observing

Important! The *DEFINITY ECS* must be administered to support Service Observing before you can use the Service Observing feature of *CentreVu* Internet Solutions.

To observe an agent and customer transaction, do the following:

1. Log in to *CentreVu* Internet Solutions.
2. From your voice terminal, open a new line and enter the Service Observing Feature Access Code (FAC) followed by the extension of the agent 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 customer transactions (text chat, escorted browsing, and Internet voice).

Text chat transactions are preceded with *caller:* for customer-entered text and *agent1:* for agent-entered text.

Agent-initiated callback during Service Observing

If the agent initiates a callback during an observed session, the observer will not see the Callback window and will be temporarily dropped from the session. The observer will be reconnected when the agent-initiated callback connects.



ACD translations for message calls

Overview A MACS engineer inputs standard *DEFINITY* ECS ACD translations as part of the messaging software installation.

These include:

- Ten VDNs
- Ten vectors
- Ten skills
- Ten mailboxes

ACD translations and message calls

A queued message has no live party on the other end. Because of this, special treatments intended for the party waiting on a queued session, 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 messages.

The use of VDN of Origin (VOA) Announcement to the agent, stating the type of message (email or fax), is encouraged. This announcement is assigned to a VDN and plays a short recording when the agent answers the message. This recording can be used to tell the agent the origination of the message (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 messages. For more information on vectoring, please see Vectors (2-38).

When translating additional VDNs, be sure to assign them the same COR as initially established for the messaging software. Otherwise, the *DEFINITY* ECS will reject call attempts from the ICM to the new extensions.



Dial Plan (required)

What is required for a dial plan

A dial plan must be administered for message 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 messages 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 count importance

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, implement stroke counts on the agent's phone.



Phantom extensions

What is required for phantom extensions

Phantom extensions are primarily used by applications that need to originate a session without the use of a physical device and without tying up unnecessary resources. Internet sessions can use this feature to eliminate the need for a Primary Rate Interface (PRI) channel for text chat and customer-initiated callbacks, thus increasing contact center capacity while using fewer PRI channels. Messages are originated to the *DEFINITY* ECS using phantom calls. Phantom sessions are distributed the same as voice sessions; but since there is no audio component, 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 text chats from phantom extensions for messages. For example, phantom extensions for text chats=11001199 and phantom extensions for messages=12001299.

Phantom extensions and the VoIP gateway

If your contact center uses a PRI-connected VoIP gateway, Phantom extensions should be given the same COR as the gateway's trunk group, with same precautions.



Ongoing operations

What is required

Once you have administered the *DEFINITY* ECS for *CentreVu* Internet Solutions, it requires very little ongoing administration.

Your contact center can increase its Internet voice capacity by adding additional VoIP gateways. Contact your Avaya Account team for configuration assistance.

When translating additional VDNs, be sure to assign them the same COR as initially established for *CentreVu* Internet Solutions destinations. Otherwise, the *DEFINITY* ECS will reject connection 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 VoIP gateway, if applicable.

VDNs should be established for each entry point (“Contact Us” button) the contact center 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, ticket sales, and so on). Different VDNs can also be used to track media type (such as text chat, Internet voice, or callback).



Administering the CentreVu Computer-Telephony 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 *CentreVu* Internet Solutions.
- References** Complete documentation containing information on *CentreVu* Computer-Telephony software is provided to customers in *.pdf* format on the product CD-ROM.



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 *CentreVu* Internet Solutions.

The following list describes what must be done in the Security Database during *CentreVu* Internet Solutions installation:

- Add the *CentreVu* Internet Solutions 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 Solutions User (TMAN), and administer the Classes of Service for the *CentreVu* Internet Solutions 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 Solutions user in the NT User Domain Manager. No additional administration is required specifically for *CentreVu* Internet Solutions. Refer to the installation documentation on the *CentreVu* Computer-Telephony software CD-ROM 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* (12-18).



Administering the messaging software

Overview

Purpose This section explains what must be administered for the messaging software.

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

Contents The following administration items are provided:

- Administration prerequisites for messages (6-67)
- Start administration through the main administration Web page (6-68)
- Messaging what do you have to administer (6-70)
- Localization for messages (6-71)
- Administer system parameters for message calls (6-75)
- Administer arenas/languages (6-76)
- Administer arena parameters (6-77)
- Administer PagePops for messages (6-79)
- Administer message-specific options (6-81)
- Administer mailboxes (6-85)
- View administered mailboxes (6-92)



Administration prerequisites for messages

- Prerequisites** Before you begin administration for the messaging software, ensure the following:
- The ICM server and *CentreVu* Computer-Telephony server are installed, connected, and functioning on the LAN.
 - The ICM application is running.
 - A Web browser is available for administrative access.
 - You know the IP addresses for the ICM/CTI server.



Start administration through the main administration Web page

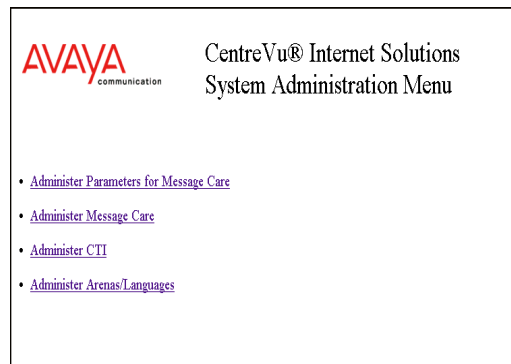
Access to the main administration interface

The messaging 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}/icmadmin

The *CentreVu* Internet Solutions System Administration Menu Web page appears.

Illustration



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.

NOTE: If you have the Internet session software installed, then links for its administration will appear.

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 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 the following buttons:
 - Help—links to Help contents associated with the page
 - Refresh—redisplays the current page with any updated values
 - Save—activates the changes you have made. Refresh the page after using this button to ensure that the displayed values are correct.



Messaging what do you have to administer

- Overview** Web-based customer administration utilities provided by the messaging software allow you 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 message origination.
 - Specify the Web PagePop per mailbox.
 - Customize the agent processing tools per mailbox. For example, each mailbox can have different values for canned responses, closure codes, SMEs, suspension codes, and so forth. In addition, these values can be set in one of the messaging software's supported languages.
 - Administer the set of canned message responses used by agents in any one of the messaging software's supported languages.

- Administration Web pages for messaging** The messaging software provides the following administration Web pages:
- Administer system parameters for message calls (6-75)
 - Administer arenas/languages (6-76)
 - Administer arena parameters (6-77)
 - Administer PagePops for messages (6-79)
 - View administered mailboxes (6-92)
 - Administer message-specific options (6-81)
 - Administer mailboxes (6-85)



Localization for messages

Overview Even though the administration Web pages for messaging are in US English, the messaging software allows the entry of administration information in the supported languages. The ability to enter administration information in any of the supported messaging software's 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.

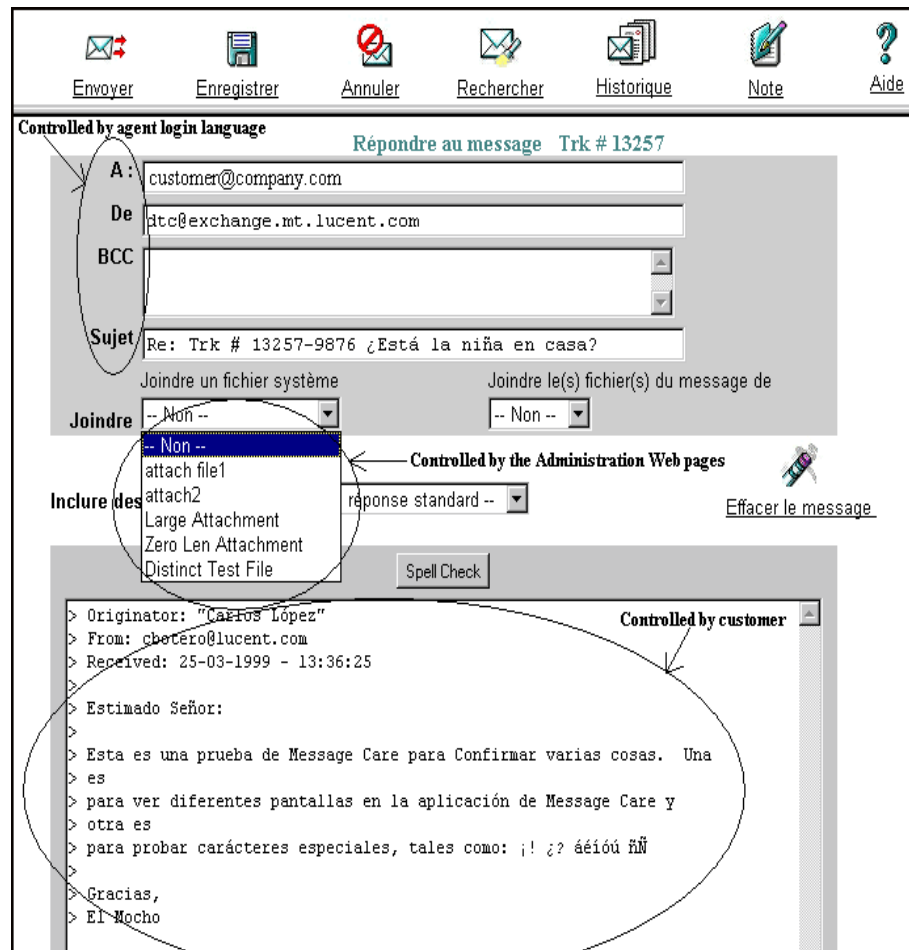
Important! When the messaging software is running in a Japanese operating environment (J-mode), then certain administration data must be entered using ASCII characters. Administration fields that require the input of ASCII characters (instead of Japanese) are identified in the Parameter description tables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

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 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 messaging software. 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 customer's message will all be in French.

Language affects the agent Web pages in the following ways:

- Agent language selection during login—determines the language of the Web page labels.
- Mailbox administration—determines the language of each file attachment selection.
- Language the customer uses to compose and send a message—determines the language of the message context.

The following graphic illustrates how language affects the agent Web pages:



When logging in to the messaging software, agents do not have to select the same language in which they will be receiving messages. For example, an agent could be receiving messages from the French mailbox but the agents 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:

Primary language

Consider the primary language preference for your monitored mailboxes and the primary language of your agents.

Mailbox language—if you can anticipate the primary language of each of your 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 is presented with values in the language of the mailbox.

Agent language—when an agent logs in to the messaging software, 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.

Auto-acknowledgement 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 may 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, the messaging software 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.

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.

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.



Administer system parameters for message calls

Overview The System Parameters Administration Web page allows administration for the ICM server domain name.

Access to the System Parameters Web page

To access the Web page that allows administration for the system, do the following:

1. From the main administration Web page (http://{icm_server_name}/icmadmin), click on the *Administer Parameters for Message Care* link.
A framed interface appears.
2. From the left frame, click on the *System Parameters* link located under the *Default* heading.
The Message Care Administration Web page appears in the right frame.

System Parameters interface for messaging

An illustration for *Message Care* Administration follows:

Description	Value
ICM Server Domain Name (IP Address)	company.com
Phantom Extensions for Message Care	

Click the Save button to save the above values.

WARNING: Administrative changes on this page will take effect automatically when the "Save" option is chosen!

[Help](#) [Refresh](#)

The ICM Server Domain Name parameter is a required field. The value must be the full domain name or IP address of the server where the ICM application is executing.



Administer arenas/languages

Overview When Avaya personnel install your message system, they will create an arena (called MsgCare) and associated the MsgCare arena with a language (US English).

You need to be aware of the MsgCare arena because you will be administering the following parameters from the MsgCare arena:

- Arena specific parameters (see Administer arena parameters (6-77))
- PagePops (see Administer PagePops for messages (6-79))



Administer arena parameters

Overview

The Arena Parameters Administration Web page allows you to administer specific parameters for the message arena.

Access to arena parameter administration

To access the Web page that allows parameter administration for the message arena, do the following:

1. From the main administration Web page (http://{icm_server_name}/icmadmin), click on the *Administer Parameters for Message Care* link.

A framed interface appears.

- From the left frame, click on the *Arena Parameters* link located under the *MsgCare* arena.

The Message Care Administration (MsgCare) Web page appears in the right frame.

Arena parameter administration interface

The following example displays the Message Care Administration (MsgCare) Web page for the MsgCare arena:

Message Care Administration (MsgCare Arena)

Description	Value
Enable Agent Logout Button?	☒ yes ☐ no
Enable Agent Logout On Close?	☒ yes ☐ no
Virtual Conference Password	

Click the Save button to save the above values.

Save

WARNING: Administrative changes on this page will take effect automatically when the "Save" option is chosen!

Help
Refresh

Parameter description for arenas

You can administer the following parameters for each arena:

Parameter	Description
Enable Agent Logout Button?	This field enables you to enable or disable the Logout button on the Agent Control Window. The default is Yes (enabled).
Enable Agent Logout On Close?	This field enables you to turn off or turn on the automatic agent logout from the contact center if the agent connection to the ICM application on the ICM server is lost or dropped.
Phantom Extensions for Message Care	This field contains the list of extensions or hunt groups used for the messaging software. These must be extensions of stations administered without hardware (AWOH).
Virtual Conference Password	This field contains the privileged password which allows presenters to set up a virtual conference.



Administer PagePops for messages

Overview The PagePop Administration Web page allows administration of the URLs associated with message progress or failure events. These are the Web pages or scripts used whenever a specific event occurs.

Access to PagePop administration

To access the Web page that allows parameter administration for PagePops, do the following:

1. From the main administration Web page (*http://{icm_server_name}/icmadmin*), click on the *Administer Parameters for Message Care* link.
A framed interface appears.
2. From the left frame, click on the *English(US)* link under the *MsgCare* heading.

The PagePop Administration Web page for the MsgCare arena appears in the right frame.

PagePop administration interface

An illustration of the PagePop Administration Web page follows:

Message Care Administration (MsgCare Arena - English(US))

Description	Value
Agent Idle URL	
Agent Alerting URL	
Out Of Service URL	

Click the Save button to save the above values.

WARNING: Administrative changes on this page will take effect automatically when the "Save" option is chosen!

Parameter description for PagePops You can administer the following parameters on the PagePop Administration Web page:

Parameter	Description
Agent Idle URL	This field must contain the URL of the Web page displayed to an agent who is logged in but not currently active on a message. You must use the agent idle URL (<i>idlepage.asp</i>) provided by the messaging software. See Important information about the Agent Idle URL parameter (6-80) for more information.
Agent Alerting URL	This field contains the URL of the Web page displayed to an agent when the agent is alerted of a new message. You must use the agent alerting URL (<i>mc_agentalert.asp</i>) provided by the messaging software.
Out Of Service URL	This field must contain the URL of the page displayed when you take the ICM out of service. You must use the out-of-service URL (<i>mc_isoff.asp</i>) provided by the messaging software.

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 session.

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
- Colombian Spanish—es-CO
- French—fr
- German—de
- Italian—it
- Brazilian Portuguese—pt-BR
- Japanese—ja



Administer message-specific options

Overview The Message Care System Options administration Web page allows you to add or modify message-specific 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 web form titled "Message Care System Options" with a red header. At the top are three buttons: "Save", "Back to Mailbox List", and "Help". Below the title is a legend: "* Indicates required field". The form contains several fields, each with a red asterisk indicating it is required:

- Site Identifier: [text box] *
- Max Simultaneous Message Calls: [text box] *
- SMTP Server: [text box] *
- Retrieve VDN Number: [text box] *
- Alarm Email Address From: [text box] *
- Alarm Email Address To: [text box] *
- Date Format: ☒ US ☐ European

Below these fields is a red warning message: "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 is a section titled "Enter value between 20 and 50 for the following items:" with the following fields:

- No. Of Suspension Codes per Mailbox: [text box with value 49]
- No. Of Closure Codes per Mailbox: [text box with value 25]
- No. Of SMEs per Mailbox: [text box with value 50]
- No. Of Canned Responses per Mailbox: [text box with value 20]
- No. Of File Attachments per Mailbox: [text box with value 20]

Interactions between 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, 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. If you are operating in J-Mode, 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)	This field is 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 messaging software. This suffix is fixed at four digits. The default suffix is 1000. Even though this release of the messaging 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)	This field indicates the maximum number of messages 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)	This field identifies 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. NOTE: The messaging software requires that the Simple Mail Transfer Protocol (SMTP) server listen on port 25. J-Mode: must use ASCII character set
Retrieve VDN Number (required field)	This field provides the VDN called when an agent retrieves a message. When an agent retrieves a message, the messaging software supports a vector route request step identifying the agent who requested the message. You need to ensure that the VDN that you administer in the messaging software has also been administered on the <i>CentreVu</i> Computer-Telephony server. To synchronize the <i>CentreVu</i> Computer-Telephony server software and the messaging software, they both must be restarted. J-Mode: must use ASCII character set

Parameter	Description
Alarm Email Address (required field)	This field provides the specified email address to which an email alarm will be sent through the SMTP server in response to a messaging software alarm condition. (Recommendation: Send the alarm email to a group mailing list of your support team.)
No. Of Suspension Codes	This field indicates the number of suspension codes that you can administer for a mailbox. The number of suspension codes cannot exceed 50. J-Mode: must use ASCII character set
No. Of Closure Codes	This field indicates the number of closure codes that you can administer for a mailbox. The number of closure codes cannot exceed 50. J-Mode: must use ASCII character set
No. Of SMEs	This field indicates the number of SMEs that you can administer for a mailbox. The number of SMEs cannot exceed 50. J-Mode: must use ASCII character set
No. Of Canned Responses	This field indicates the number of canned responses that you can administer for a mailbox. The number of canned responses cannot exceed 50. J-Mode: must use ASCII character set
No. Of File Attachments	This field indicates the number of file attachments that you can administer for a mailbox. The number of file attachments cannot exceed 50. J-Mode: must use ASCII character set
Date Format	This field provides 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> .
Junk Mail Screening	This field provides a list of up to 20 email addresses (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 messaging software marks the message status as blocked. Blocked messages will not receive an auto-acknowledgment nor will the messaging software deliver them to agents. 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. Wild cards are supported. J-Mode: must use ASCII character set

Parameter	Description
Subject Screening to Block Auto Acknowledgment	This field enables you to enter up to ten text strings that the messaging software 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.



Administer mailboxes

Overview

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 Web page 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 (13-27).

Illustration

An illustration of the Mailbox Administration Web page follows:

The screenshot displays the 'Mailbox Administration' web page. At the top, there are buttons for 'Save', 'Copy', 'Back to Mailbox List', and 'Help'. On the left side, there is a vertical list of links: '[Subject Routing]', '[Canned Responses]', '[Suspension Codes]', '[Suspension Time]', '[Closure Codes]', '[SME list]', and '[File Attachments]'. Below these links are 'Save' and 'Help' buttons. The main content area is titled 'Mailbox Administration' in red. It contains several sections of configuration options:

- Enable Polling:** Radio buttons for 'Yes' (selected) and 'No'.
- Enable Reporting:** Radio buttons for 'Yes' (selected) and 'No'.
- Enable Junk Mail Screening:** Radio buttons for 'Yes' (selected) and 'No'.
- Friendly Mailbox Name:** A text input field with a red asterisk.
- Mailbox Server:** A text input field with a red asterisk.
- Login Name:** A text input field with a red asterisk.
- Login Password:** A text input field with a red asterisk.
- Return Email Address:** A text input field with a red asterisk.
- Message Display URL:** A text input field with a red asterisk.
- Message View URL:** A text input field with a red asterisk.
- Auto Acknowledgment File:** A text input field.
- Select Number to Call:** A section header in red.
- Default VDN Number:** A text input field with a red asterisk.
- Suspend VDN Number:** A text input field with a red asterisk.
- Route To Number:** A text input field.

At the bottom, there is a red warning message: 'WARNING: Each VDN used by Message Care Mailbox must also be administered in the T-server.' Below this, a note states: '* Indicates required field for system operation'.

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.

You can administer the following parameters on the Mailbox Administration Web page. If you are operating in J-Mode, 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	This field provides 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.
Enable Reporting	This field an option which you can set to Yes or No to enable or disable reporting. When you set this option to Yes, the messaging software 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, the messaging software 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. You cannot enable reporting if polling is disabled. 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.
Friendly Mailbox Name (required field)	This field provides the label of a mailbox used by the messaging software for report and search operations. Each mailbox name must be unique. NOTE: Do not change the Friendly Name of a mailbox after you have administered the mailbox and after it is in use.
Mailbox Server (required field)	This field identifies the IP address or host name of the mail server where the mailbox resides. J-Mode: must use ASCII character set
Login Name (required field)	This field indicates the login ID of the mailbox that the messaging software monitors. J-Mode: must use ASCII character set

Parameter	Description
Login Password (required field)	This field indicates the login password of the mailbox that the messaging software monitors. If your system automatically requires new passwords, you must update the value used by the messaging software. J-Mode: must use ASCII character set
Return Email Address (required field)	This field identifies 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). J-Mode: must use ASCII character set
Message Display URL (required field)	This field identifies the URL used to deliver message content to an agent so that the agent can view a message and compose a reply. A default value is provided for the Message Display URL. You can modify the Message Display URL to include your <i>Message Care</i> server name. J-Mode: must use ASCII character set
Message View URL (required field)	This field identifies the URL used to allow an agent to view a message without being able to make any changes. The messaging software provides a default value for the Message View URL. You can modify the Message View URL to include your <i>Message Care</i> server name. J-Mode: must use ASCII character set
Suspend VDN (required field)	This field identifies the VDN called when the suspension timer expires or a related message is received while the message is suspended (the messaging software is designed to support an adjunct route step in this VDN). The messaging software detects the expiration of a suspended timer within minutes of expiration. You need to ensure that the VDN you administer in the messaging software has also been administered on the <i>CentreVu</i> Computer-Telephony server. To synchronize the <i>CentreVu</i> Computer-Telephony server software and the messaging software, they both must be restarted. It is important to consider how to cover a session when an agent is not logged in; please refer to <i>Vectors</i> (2-38). J-Mode: must use ASCII character set

Parameter	Description
Auto Acknowledgment File	This field identifies the full path name of the file used for the ASCII file containing the text of the acknowledgment. The auto-acknowledgment file must be placed on a local drive on the <i>Message Care</i> server. If they are specified to reside on a mapped network drive, the emails using the auto-acknowledgment file will fail. If you do not administer an auto-acknowledgment file location, the messaging software will not send auto-acknowledgments from this mailbox.
Enable Junk Mail Screening	This field provides 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, the messaging software will block messages administered in the System Options “Junk Mail Screening” field.
Default VDN Number (required field)	This field identifies the VDN called when the messaging software 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, the messaging software overrides this value by matching values in the Subject Based Call Routing administration parameter. 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. J-Mode: must use ASCII character set
Route To Number	This field identifies specifies 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. J-Mode: must use ASCII character set
Rank	This field identifies the messaging software uses the Rank field in several of the tables to impose an ordering on the entries. For example, when the agent shows the list of Closure Codes, it might be more efficient to have certain entries at the top. The administration screens ensure that the values in these fields are unique and ordered (for example, for ten entries, they must have the values 1 through 10). J-Mode: must use ASCII character set

Parameter	Description
Subject Based Call Routing	This field enables you to enter up to 20 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. Strings are searched in order of ranking, and that partial matches are valid. For example, if the first search string is “DEFINITY” and the second search string is “DEFINITY ECS,” all cases of “DEFINITY ECS” will match on the first search string, since DEFINITY is included in the text. It is important to be explicit and to pay attention to partial matches when administering and ranking search strings. To route a message, the messaging 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. Each mailbox monitored by the messaging software 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 messaging software select a number based on the contents of the message subject field by administering subject-based call routing. J-Mode: you must enter the route to number in ASCII. You can enter the string to match upon in Japanese characters.
Canned Responses	This field provides a list of any ASCII files (“canned answers” to frequently-asked questions) that agents can use in replying to the customer. For each file, you must include its location and the label that the agent uses to select it. If you incorrectly administer a canned response file and the system cannot find the file when an agent selects it, the messaging software presents an error message to the agent. 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. J-Mode: you must enter the canned repose path name, including the canned repose file name, in ASCII. You can enter the labels presented to the agents in Japanese.
Suspension Codes (required field)	This field provides a list of reason codes for agents to assign when suspending a message. If you do not administer at least one Suspension Code, then the agent will not be able to suspend a message.

Parameter	Description
Suspension Time (required field)	This field provides a set of minutes for which an agent can keep a message suspended. Agents can choose from these values when suspending a message from this mailbox. If you do not administer Suspension Times, then the agent will not be able to suspend a message. J-Mode: must use ASCII character set
Closure Codes (required field)	This field provides a list of reason codes for agents to assign when closing a message; the messaging software uses the set of administered closure codes to generate reports. If you do not administer at least one Closure Code, then the agent will not be able to close a message.
SME List	This field provides 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. 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.
File Attachments	This field provides a list (name and location) of the contact 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 contact center file attachments. This association is used in creating the Multipurpose Internet Mail Extensions (MIME) message sent to the customer through the SMTP server. MIME is a common method for transmitting non-text files through Internet email, which was originally designed for ASCII text. MIME encodes the files using one of two encoding methods and decodes it back to its original format at the receiving end. A MIME header is added to the file which includes the type of data contained and the encoding method used.

Mailbox Administration 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, the messaging software 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 the messaging software.



View administered mailboxes

Overview The Administer Message Care link (from the *CentreVu* Internet Solutions System Administration Menu) jumps to the Message Care Administration Web page which allows you to administer parameters specific to the messaging 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:

Message Care Administration						
[Administer Message Care System Options] [Add Mailbox]						
Mailbox List						
Polling	Mailbox	Return Email Address	VDN	Auto-Ack	Subject Routing	Reporting
On	ml04-9sales1	ml04-9sales1@	20301	On	Off	On
On	ml04-9sales2	ml04-9sales2@	20302	On	Off	On

Column description for the Message Care Administration Web page

This is the Web page 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 customer 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.



7 Agent login and logout

Overview

Purpose The following section describes how an agent logs in and logs out of *CentreVu* Internet Solutions.

Audience

This information is intended for anyone needing to log in to and out of the *CentreVu* Internet Solutions 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 (7-2)
- Agent login (7-3)
- Agent logout (7-6)



Agent login Web pages

Background The media access types your contact center handles determines the sample Agent Login Web page(s) that you will receive (see What is CentreVu Internet Solutions? (1-6) for information about media access types).

The following table displays the sample Agent Login Web page(s) you will receive with your purchase:

	Sample real-time Agent Login Web page	Sample messaging Agent Login Web page
CentreVu Internet Solution (both Internet sessions and messages)	X	X
Internet sessions only	X	
Messages only		X

Which Agent Login Web page should you use?

CentreVu Internet Solutions 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. See the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM for information on customizing the agent login Web page.

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 (6-80). The messaging agent idle page (Message Care Home Page) is the agent idle page that ensures full messaging functionality. The messaging agent idle page is located in: `http://{message_care_server}/mcscrip/mc_agent.html`

Preferred language of agent

CentreVu Internet Solutions provides agent login pages for the languages it supports. The agent selects a preferred language when logging in to the system. Sample multi-session login pages are available at `demons/icc/{language_code}/icc_agent.html`. Sample single-session login pages are available at `demons/icc/{language_code}/icc_sagent.html`.



Agent login

Before you beginAbout agent login

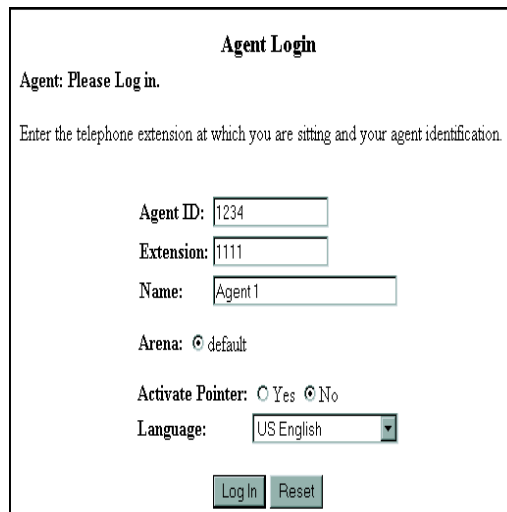
Agents logging in to the ICM can process Internet sessions and messages (providing that their station is administered on the *DEFINITY* ECS for both skills).

Log in procedures

An agent logs in to *CentreVu* Internet Solutions 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:



The screenshot shows the 'Agent Login' web page. At the top, it says 'Agent: Please Log in.' followed by the instruction 'Enter the telephone extension at which you are sitting and your agent identification.' Below this are several input fields: 'Agent ID:' with the value '1234', 'Extension:' with the value '1111', and 'Name:' with the value 'Agent 1'. There are also radio buttons for 'Arena:' (selected 'default') and 'Activate Pointer:' (selected 'No'). A 'Language:' dropdown menu is set to 'US English'. At the bottom are 'Log In' and 'Reset' buttons.

-
- 2 Enter your agent ID, extension, your name, preferred language, and any additional items requested.

Result: An Agent Control Window appears.

The Agent applet that displays depends on whether you were administered for multi-sessions or for single sessions. The example below is the agent applet in a single session environment.

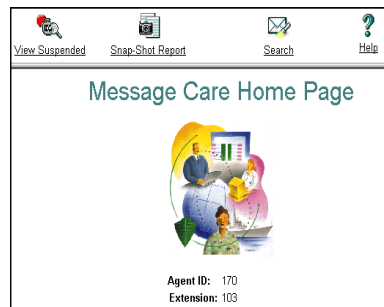
The screenshot shows a web browser window titled "Agent Control Window". Inside, there is a section titled "CentreVu Internet Solutions Control Window" with a small icon of two people. Below this, a text box displays the following status: "Establishing connection.", "Connection established.", "Login was successful.", "Waiting for a call.", and "Ringing.". Below the text box are four buttons: "Send", "<<Option>>" (a dropdown menu), "Log Out", and "Answer". Below these buttons is a text input field labeled "Enter Text or URL Below:". Below the input field is a "Help" button. At the bottom of the window, there are three sections: "Visited Links" with a "Visited Links" dropdown and a "Mail URLs" button; "Canned Phrases" with a "Pick a phrase below" dropdown; and "Links" with a "Pick a link below" dropdown.

-
- 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 displays 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 sessions or log out.

Important! If you are going to handle messages, 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 session 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 session, wait until the idle page fully loads, and then make yourself available to receive a session.

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 *CentreVu* Internet Solutions:
- Using the Log Out button (when it is enabled) from the Agent Control Window. Enabling or disabling the Log Out button is an administrative option on the Internet Call Manager (ICM). See Chapter 6, Administration for details.
 - Using your telephone 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 messaging software, you must close the Agent Control Window and the messaging Web page(s).



8 How to process Internet sessions

Overview

- Purpose** The following information details how an agent handles various types of Internet sessions.
- Audience** This information is intended as an overview for anyone who needs to know how various types of sessions are handled by the system and how they appear to the customer and to the agent.
- Contents** This section contains information about the following:
- Agent and Caller Control Windows (8-2)
 - Internet sessions (8-12)
 - Drop Internet sessions (8-31)



Agent and Caller Control Windows

Overview

Purpose After an agent logs in to the Internet session software through a Web page, the ICM launches the Agent Control Window (applet) on the agent's desktop. After a customer requests a session (other than callback only), the Caller Control Window (applet) download to the customer's desktop. Both the Agent and Caller Control Windows provide session progress status, enable text chat and escorted browsing, and allow the agent or customer to drop the session.



Agent Control Windows

Overview The Internet session software provides the following two types of Agent Control Windows:

- Multi-session agent interface
- Single-session agent interface

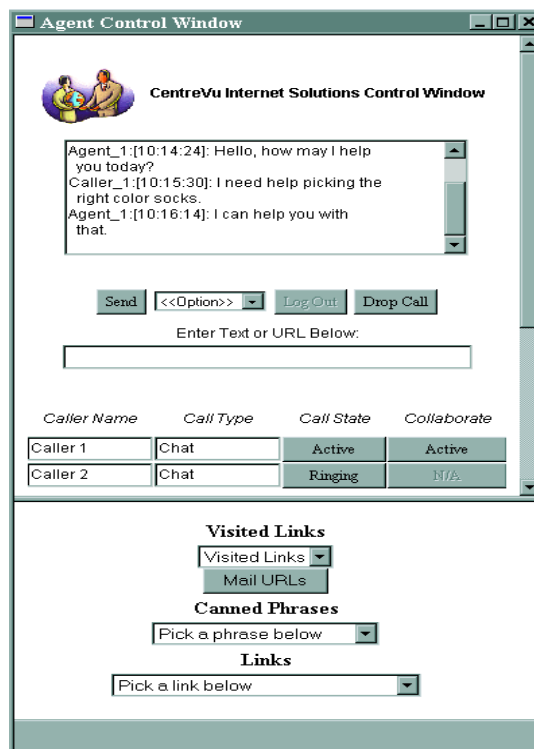
Multi-session agent interface

The multi-session agent interface allows an agent to process multiple simultaneous internet sessions. The agent must be administered to handle multiple simultaneous sessions; when such an agent logs in, the software automatically downloads the multi-session agent interface to the agent's desktop.

Important! The agent should use the Agent Control Window for session control functions as much as possible. Using telephone controls to switch between sessions could have unpredictable results, including the loss of a session.

Illustration of the multi-session agent interface

The following illustration is an example of the Agent Control Window for a multi-session environment:



Field and button description for the multi-session Agent Control Window

The multi-session Agent Control Window provides the following fields and buttons:

Field or Button	Description
Session Transcript area	The Session Transcript area is a read-only box that displays all of the text chat that the agent and customer exchange during a chat session, as well as connection and system status information for the current active session. There are two important points to keep in mind regarding the Session Transcript area: • When the agent changes the active session, the contents of the Session Transcript area change to show only information for the new active session. • When an agent receives a transferred session or joins an in-progress session through the conference feature, the Session Transcript area populates with the transcript of the entire session up to that point.
Enter button	The Enter button submits information that is in the Text Entry box to the ICM server for processing. There are two important points to keep in mind about the Enter button's functionality: • The ICM server processes any string that begins with <i>http:</i> as a URL, and attempts to synchronize the customer's browser with that address • If the agent clicks the Enter button with no text in the Text Entry box, the ICM server processes this as a "send page" command and synchronizes the customer's browser with the URL currently being viewed by the agent.
Option drop-down	The Option drop-down is a context-sensitive list that allows the agent to choose a system function. For instance, immediately after login, only the Configuration option may be available. In contrast, when an Internet session is active, the Option drop-down contains many choices that allow the agent to access Conference, Transfer, Join Us, and other system features.
Log Out button	The Log Out button logs off of the ACD and disconnects the agent from the ICM server (so that the agent can no longer receive Internet sessions). This button is enabled only when the agent is logged in but is not processing any Internet sessions.
Drop Call	The Drop Call button drops the active Internet session.

Field or Button	Description
Text Entry box	The Text Entry box is the text box through which the agent chats and shares Web pages with the customer. • To chat with the customer, the agent can: • Type text in the Text Entry box and then click the Enter button or press the Enter key on the keyboard • Paste text from clipboard and then click the Enter button or press the Enter key on the keyboard • To share a Web page with the customer, the agent can: • Type a URL in the Text Entry box and then click the Enter button or press the Enter key on the keyboard. Note that the URL must begin with <i>http:</i> and must be the only information that the agent enters. • Click the Enter button or press the Enter key on the keyboard, with no text in the Text Entry box. This sends the customer the page that the agent is currently viewing.

Field or Button	Description
Multisession Status block	The Multisession Status block, below the Text Entry box, is a grid of rows and columns representing all currently connected Internet sessions. Each row corresponds to a particular session; the data in each column is as follows: • Caller Name box—a read/write text box for the customer’s name. The box is empty if the customer did not provide a name on the “Contact Us” Web page, but the agent can click the box to type a name (or change the customer-provided name) at any time. • Call Type box—a read-only text box that indicates the type of Internet session (Chat, Voice and chat, Callback, or Callback and Collaborate) • Call State button—a button that enables the agent to quickly see the status of all sessions and to perform actions such as putting an active session on hold to attend to another. An Internet session's Call State button can have one of three labels: • Ring—this label indicates that the Internet session is incoming and the agent has not yet answered it. By clicking this button, the agent answers the session (making its state Active) and puts the previously active session on Hold (but does not change its collaboration state). • Active—for an Internet voice session, this label indicates that the agent and customer are talking (whether they are also Web collaborating depends upon the state of the Collaboration button). By clicking this button, the agent puts the Internet voice session on Hold (but does not change the collaboration state of the session, or activate any inactive session). For a chat-only session, this label does not necessarily mean that the agent and customer are participating in text chat: the party with whom the agent is chatting is determined by the Collaboration button. • On Hold—for an Internet voice session, this label indicates that the session is inactive. By clicking this button, the agent makes the session active and puts the previously active Internet voice session, if any, on Hold (but does not change the collaboration state of the session). For a chat-only session, this label does not necessarily mean that the agent and customer are not participating in text chat: the party with whom the agent is chatting is determined by the Collaboration button. • Collaborate button—a button that indicates whether the agent is currently participating in Web-based collaboration (text chat, escorted browsing, and so forth) with the customer. An Internet session's Collaborate button can have one of the following four labels: • N/A—the session is ringing • Active—the agent is collaborating with the customer. By clicking this button, the agent puts the collaboration into Idle mode. • Idle (n sec)—the displayed number of seconds have elapsed since the last time the agent collaborated with the customer. The timer updates every 30 seconds. By clicking on this button, the agent activates collaboration for this session and puts any active collaboration into Idle mode. • New Message—if the customer sends chat text while in the session is in the Idle state, the label changes to “New Message.” By clicking on this button, the agent activates collaboration for this session and puts any active collaboration into Idle mode.

Field or Button	Description
Other controls	Other controls that may be available on the multi-session Agent Control Window are: • Visited Links—a drop-down list showing the URLs the agent and customer have visited together (using the Escorted Browsing features) during the current session • Mail URLs—a button that the agent can use to send the list of visited links to any email address the agent specifies • Canned Phrases—a drop-down list containing pre-written, or “canned,” phrases that the agent can use for common session occurrences such as initial greeting, goodbye, and request for payment. Canned phrases can also ensure that agents follow business rules when making certain inquiries or responding to customer complaints. • Links—a drop-down list containing shortcuts to useful Web pages

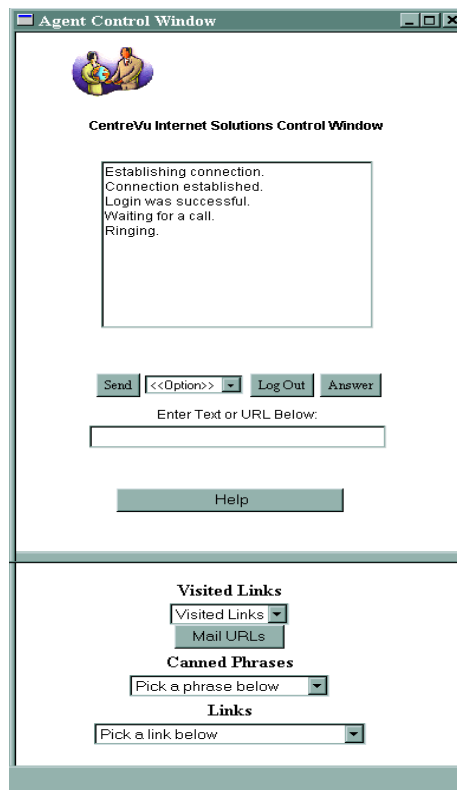
Single-session agent interface

Agents administered through the *DEFINITY* ECS to handle one Internet session at a time see the single-session agent interface upon login.

The single-session agent interface is similar to the multi-session agent interface, except that there is no Multisession Status block.

Illustrations of the single-session agent interface

The following illustration is an example of the Agent Control Window for a single-session environment:



Field and button description for the single-session agent interface

The single-session Agent Control Window provides the following fields and buttons:

Field or Button	Description
Session Transcript area	The Session Transcript area is a read-only display box that displays all of the text chat that the agent and customer exchange during a chat session, as well as connection and system status information for the current active session. There are two important points to keep in mind regarding the Session Transcript area: • When the agent changes the active session, the contents of the Session Transcript area change to show only information pertaining to the new active session. • When an agent receives a transferred session or joins an in-progress session through the conference feature, the Session Transcript area populates with the transcript of the entire session up to that point.
Enter button	The Enter button submits information that is in the Text Entry box to the ICM server for processing. There are two important points to keep in mind about the Enter button's functionality: • The ICM server processes any string that begins with <i>http:</i> as a URL, and attempts to synchronize the customer's browser with that address • If the agent clicks the Enter button with no text in the Text Entry box, the ICM server processes this as a "send page" command and synchronizes the customer's browser with the URL currently being viewed by the agent.
Option drop-down list	The Option drop-down list is a context-sensitive list that allows the agent to choose a system function. For instance, immediately after login, only the Configuration option may be available. In contrast, when an Internet session is active, the Option drop-down list contains many choices that allow the agent to access Conference, Transfer, Join Us, and other system features.
Log Out button	The Log Out button logs off of the ACD and disconnects the agent from the ICM server (so that the agent can no longer receive Internet sessions). This button is enabled only when the agent is logged in but is not processing any Internet sessions.
Drop/Answer button	The label and function of the Drop/Answer button changes to reflect the status of the current session. When a session is incoming, the agent clicks Answer to receive the session. When a session is active, the agent clicks Drop to drop the session.

Field or Button	Description
Text Entry box	The Text Entry box is the text box through which the agent chats and shares Web pages with the customer. • To chat with the customer, the agent can: • Type text in the Text Entry box and then click the Enter button or press the Enter key on the keyboard • Paste text from clipboard and then click the Enter button or press the Enter key on the keyboard • To share a Web page with the customer, the agent can: • Type a URL in the Text Entry box and then click the Enter button or press the Enter key on the keyboard. Note that the URL must begin with <i>http:</i> and must be the only information that the agent enters. • Click the Enter button or press the Enter key on the keyboard, with no text in the Text Entry box. This sends the customer the page that the agent is currently viewing.
Help button	Use the Help button to display help information in a separate browser window.
Other controls	Other controls that may be available on the single-session Agent Control Window are: • Visited Links—a drop-down list showing the URLs the agent and customer have visited during the current session • Mail URLs—a button that the agent can use to send the list of visited links to any email address the agent specifies • Canned Phrases—a drop-down list containing pre-written, or “canned,” phrases that the agent can use for common session occurrences such as initial greeting, goodbye, and request for payment. Canned phrases can also ensure that agents follow business rules when making certain inquiries or responding to customer complaints. • Links—a drop-down list containing shortcuts to useful Web pages

Agent Control Window options

The following functions are available at different times from the Option drop-down list in both the single- and multi-session Agent Control Windows:

Option	Description
Configure	The Configure option, which is customizable by the contact center, can allow the agent access to arena-specific features such as Telepointer and Auto Sync.
Callback	The Callback option allows the agent to make a telephone callback to the customer. It is active when the agent is processing a session and not already involved in a callback. See Agent-initiated callback (8-20) for more information.
Conference	The Conference option functions similarly to the Conference button on the agent's voice terminal, allowing the agent to include another party in the current session. If the person joining the session is a logged-in agent, then the conferenced agent can participate in Web-based collaboration. See Using Conference (8-25) for more information.
Transfer	The Transfer option functions similarly to the Transfer button on the agent's voice terminal, allowing the agent to transfer the current Internet session to another agent. The agent receiving the transfer receives a transcript of the entire session and the list of visited links. See Using Transfer (8-26) for more information.
Voice Consult	The Voice Consult feature allows an agent to consult with a third party during an Internet session. The customer cannot hear voice interaction between the agent and consultant unless the agent establishes a conference. However, if the consultant is a logged-in agent then all three parties participate in Web-based interactions such as text chat from the beginning of the consultation. See Using Voice Consult (8-27) for more information.
Join Us	The Join Us feature allows a third party with Internet access to join an in-progress Internet session. See Using Join Us (8-29) for more information.



Caller Control Window

Overview If the customer requests a session type other than call back only, a Caller Control Window downloads to the customer's desktop. The Caller Control Window provides session progress status, enables the text chat, escorted browsing and HTML forms sharing functions, and allows the customer to end the session.

Illustration of the Caller Control Window

The Caller Control Window is similar in appearance and function to the single-session Agent Control Window, with the exception that the Option drop-down list is replaced by a Send Page button specifically programmed to sync the Agent's browser with the customer's.



Internet sessions

Overview

Purpose The purpose of the following information is to explain the different types of Internet sessions and how an agent processes each type.

Contents The following topics are discussed:

- Receiving Internet sessions (8-13)
- Internet voice and chat sessions (8-14)
- Chat-only sessions (8-16)
- Request for callback (8-17)
- Caller-initiated callback process (8-18)
- Agent-initiated callback (8-20)
- Callback and collaborate (8-22)
- HTML forms sharing (8-23)
- Using Conference (8-25)
- Using Transfer (8-26)
- Using Voice Consult (8-27)
- Using Join Us (8-29)



Receiving Internet sessions

Types of Internet sessions received

There are four types of Internet sessions an agent can receive:

- Internet voice and chat
- Chat-only
- Request for callback (caller-initiated and agent-initiated)
- Callback and collaborate

In all cases, when an agent receives an Internet session, the voice terminal alerts the agent and is active for the call whether or not voice is used (for example, voice is not used during a chat-only call).

If the Vector Directory Number (VDN) of Origin Announcement (VOA) feature for the originating ACD is administered, the agent hears a brief announcement indicating the type of incoming session (for example, “voice” or “chat”). The Agent Control Window displays the “call connected” message and then the agent’s browser updates with a PagePop.

Multiple simultaneous Internet sessions

Agents administered through the *DEFINITY* ECS to handle multiple simultaneous Internet sessions do so through the Multi-session Agent Control Window (see Multi-session agent interface (8-3) for more information). The Call State button on the Agent Control Window allows the agent to switch between multiple Internet sessions; the sessions may be of different media types, but at any time, only one session can be active. The others must be either On Hold or Ringing. When the agent switches from one session to another, the Session Transcript window changes to show chat transcript and system status information for that session only.



Internet voice and chat sessions

Stages of a voice and chat session

Here is how an Internet voice and chat session works:

- 1 A customer requests a session that involves both Internet voice and chat.
- 2 The Caller Control Window downloads to the customer's desktop.
- 3 The customer-side voice client (either *Microsoft NetMeeting* or the Avaya Web Voice Client) launches on the caller's desktop.

Note: Because current *Netscape* browsers cannot automatically launch *NetMeeting*, a customer using *NetMeeting* with *Netscape* for the first time must register with the browser as follows (this need only be done once):

1. When the "unknown file type" pop-up window appears, the customer selects the Pick App button.
2. Spaces and capitalization are important when entering the following command. Under "configure external viewers," the customer enters `rundll32.exe msconf.dll,OpenConfLink`
3. The customer selects OK.

NetMeeting will launch after a delay. If *NetMeeting* does not launch, see Customer is unable to launch NetMeeting (13-37).

- 4 The session may be queued, with appropriate status messages and Web pages being delivered to the customer's desktop.
- 5 The session is delivered to the agent.
- 6 The agent answers, activating the Agent Control Window's session control functions. Features such as Conference, Transfer, and Join Us are available directly from the Options drop-down list; Telepointer and

-
- 7** The agent's and customer's browsers update to the “call answered” URL (if administered).
-

- 8** The agent communicates with the customer by voice over the Internet through the voice terminal. The customer communicates with the agent through a microphone and speakers (or a headset).

If the agent cannot hear the customer during an Internet voice session, see *Agent cannot hear customer during an Internet voice session* (13-25).

- 9** The text chat, escorted browsing, and HTML forms-sharing features work as described in *Chapter 1, About CentreVu Internet Solutions*. □

Chat-only sessions

Stages of a chat-only session

Here is how a chat-only session works:

- 1** A customer requests a chat-only session.

- 2** The Caller Control Window downloads to the customer's desktop.

- 3** The session is queued and then delivered to the agent.

- 4** The agent answers the session, enabling the Agent Control Window's session control functions.

- 5** Both the agent's and customer's browsers update to the Call Answered URL (if administered).

- 6** The agent and customer can communicate through text chat by typing text into the text entry field and selecting either the **Enter** key on the keyboard or the Enter button.

- 7** Escorted browsing and HTML forms sharing is available.



Request for callback

Overview

There are four types of callbacks:

- Caller-initiated—a customer wishes to receive a telephone call from an agent rather than establish an Internet session
- Agent-initiated—an agent requests that the customer on an already-established Internet session provide a telephone phone number, perhaps because of a poor-quality Internet voice connection. In order to maintain the Internet session, the customer must have the ability to receive the telephone call while still connected to the Internet.
- Callback and collaborate—the customer on an already-established, non-voice Internet session requests that the agent call on the telephone while continuing to communicate through text chat and escorted browsing. The the customer must have the ability to receive the telephone call while still connected to the Internet.
- Scheduled callback—a caller specifies a time interval during which he/she wishes an agent to call. (Scheduled callback is an optional feature. For more information, see the Web Guidelines documentation.)

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 customer that requests a callback wants to receive a telephone call from an agent rather than establish an Internet session. No Caller Control Window downloads to the customer’s desktop; therefore, text chat, escorted browsing, and HTML forms-sharing features are not available.

Caller-initiated callback process

Here is how caller-initiated callback works:

- 1
- The customer enters a telephone number and requests a callback from the “Contact Us” Web page, as shown in the following illustration:

CentreVu Internet Solutions

Call Us

Your Name:

Callback Caller

Your Phone:

555 555 5555

Call type:

☐ Internet Voice and Chat

☐ Chat Only

☒ Call Back

Call Us

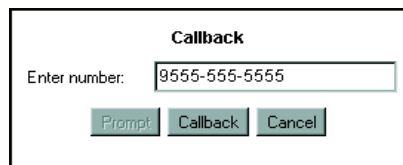
Reset

- 2
- The customer sees a PagePop page with a message such as “We will be calling you back shortly.” The message should remind the customer that the telephone line must not be busy (with the Internet connection, for instance) in order for the callback to proceed.

- 3
- The callback request is delivered to an agent in the form of an incoming Internet session of type “Callback,” as in the following illustration:

Caller Name	Call Type	Call State	Collaborate
Callback Caller	Callback	Ringin	N/A

-
- 4** The agent clicks the **Call State** button to begin processing the callback. The callback controls display with the customer's telephone number (and any prepended digits, as administered by the contact center), as in the following illustration:

A screenshot of a web-based interface titled "Callback". It features a text input field labeled "Enter number:" containing the text "9555-555-5555". Below the input field are three buttons: "Prompt", "Callback", and "Cancel". The "Prompt" button is highlighted with a green border.

-
- 5** The agent has two options:
- Click the **Call Back** button to call the number displayed. Before doing so, the agent can edit the number (for example, if the callback number is not a local number, the agent can add a "1" and/or a country code in front of the callback number) and then click the **Call Back** button.
 - Click the **Cancel** button to cancel the callback. There is no indication to the customer that the callback is not being processed, and the callback session remains active until the agent clicks the **Drop Call** button.
-
- 6** The customer receives the telephone call, and the agent and customer speak.
-
- 7** Either party can drop the callback by hanging up the telephone.



Agent-initiated callback

Introduction to the agent-initiated callback process

Sometimes Internet telephony voice quality deteriorates during a session, or for some other reason the agent and a customer already conducting an Internet session want to talk on a regular telephone line. In such a case, only the agent can initiate the callback.

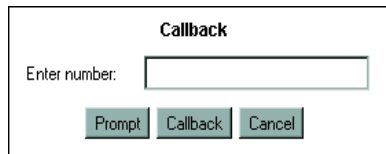
During Internet voice and chat calls or chat-only sessions, the Call Back command is available from the Option drop-down list in the Agent Control Window. By selecting this, the agent starts the agent-initiated callback process.

Agent-initiated callback process

Here is how the agent-initiated callback works:

- 1 The agent selects Call Back from the Option drop-down list in the Agent Control Window.
-

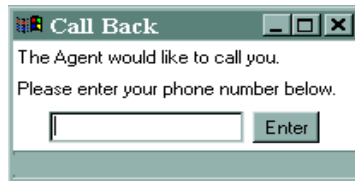
- 2 The Agent Control Window shows the callback commands:



The image shows a dialog box titled "Callback". It contains a label "Enter number:" next to a text input field. Below the input field are three buttons: "Prompt", "Callback", and "Cancel".

- 3 The agent has the following three options:
 - Initiate a callback without prompting the customer for a telephone number by entering the customer's number in the text box and then clicking the Call Back button.
 - Prompt the customer for a callback number by clicking the Prompt button. The customer sees a Call Back Phone Number dialog box and types in the telephone number. This process is described in further detail in steps 47 of this procedure.
 - Cancel the callback by clicking the Cancel button.

-
- 4 If the agent prompts the customer for the callback number, the customer receives the following Call Back Phone Number dialog box:



-
- 5 The customer enters the phone number and clicks the Enter button.
-
- 6 The text box on the agent's callback controls populate with the callback number.
-
- 7 The agent has the following three options:
- Proceed with the callback by editing the number (if necessary) and then clicking the Call Back button.
 - Request that the customer to submit a different callback number by clicking the Prompt button.
 - Cancel the callback by clicking the Cancel button.
-
- 8 The customer receives the telephone call, and the agent and customer speak. Internet collaboration can continue if the customer has the ability to receive the telephone call while still connected to the Internet; otherwise, in order to receive the callback the customer must have first had to disconnect from the Internet.



Callback and collaborate

Introduction to callback and collaborate process

A customer can request a callback and collaborate session if the customer has the ability to receive a telephone call while connected to the Internet.

Callback and collaborate process

Here is how the callback and collaborate process works:

- 1** The customer requests a callback and collaborate session from the “Contact Us” Web page.

- 2** The Caller Control Window downloads to the customer's desktop.

- 3** The session is queued and then delivered to the agent.

- 4** The agent answers the session, enabling the Agent Control Window's session control functions.

- 5** Both the agent's and caller's browsers update to the Call Answered URL (if administered).

- 6** The callback request is delivered to the agent in the form of a window displaying the callback number. At this point, the agent proceeds with the callback in a manner identical to the agent-initiated callback (see Agent-initiated callback (8-20)).

- 7** The agent places the callback. The customer and agent can now communicate through the following methods:
 - Text chat
 - Escorted browsing
 - HTML forms sharing
 - Voice communication over the telephone



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 agent and customer to interactively complete HTML forms.

What is an HTML form?

An HTML form can do anything that a paper form can do, such as conduct surveys, take orders for products, gather feedback, and so forth.

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.
- Check boxes—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 service for the agent to provide to the customer.

For example, a customer wants to complete an HTML form order a new computer. The customer is unsure about the information required in some of the fields; the agent can help the customer 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 party who first accessed the form ensures, by using the send page feature, that the other parties involved in the forms sharing have the same form loaded. Customers accomplish this using the Send Page button on the Caller Control Window; agents accomplish this by clicking the Send button or pressing the **Send** key on the keyboard with no text in the Agent Control Window's Text Entry box.

Send form data

When one party enters data on the form, the Internet session software automatically sends that new data to the other participants.

Note that if more than one participant inputs data in the same field at the same time, the form may get out of sync. Using the send page feature synchronizes all participants' view of the form.

To submit a completed form, the customer must use a Submit (or similar) button on the Web page containing the form. An agent *cannot* submit a form.

Browser security considerations

Due to Internet security considerations, newer browsers set security restrictions on the capabilities of downloaded applets and scripts. If your contact center shares Web pages with customers, browser security restrictions may be a factor. For more information on browser security, see Appendix C, Handling browser security restrictions.



Using Conference

What is a conference?

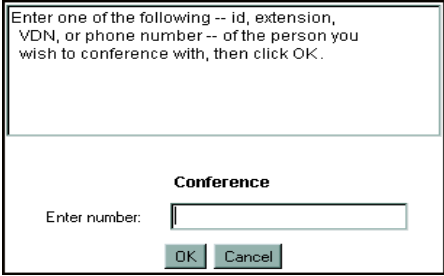
Conferencing through *CentreVu* Internet Solutions is similar to a telephone conference, with the additions that:

- If the party joining the current Internet session is a logged-in agent, the conferenced agent can participate in Web-based collaboration.
- Agents logged in to the conference can selectively drop other members of the conference, or drop the entire conference. For more information, see [Dropping conferences \(8-33\)](#)

Conference process

Here is how the conference process works during an active Internet session:

- 1** The agent selects **Conference** from the **Options** drop-down list. The **Conference** controls appear, as shown in the following illustration:



Enter one of the following -- id, extension, VDN, or phone number -- of the person you wish to conference with, then click OK.

Conference

Enter number:

OK Cancel

- 2** The agent enters the number of the party to conference (this could be a telephone number, VDN, agent ID, or another number; see the help text in the session transcript window for instructions).
- 3** The agent clicks **OK**.
- 4** The conference is established.



Using Transfer

What is a transfer? Transferring through *CentreVu* Internet Solutions is similar to a telephone transfer: the agent processing an Internet session transfers the session and all related data to another agent, who processes the session from that point onward.

Transfer process Here is how the transfer process works during an active Internet session:

- 1** The agent selects **Transfer** from the **Options** drop-down list.
- 2** The agent enters the number of the agent to which to transfer (this could be a VDN, agent ID, or another number; see the help text in the session transcript window for instructions).
- 3** The agent clicks **OK**.
- 4** The session, including chat and URL transcripts, transfers to the second agent. The original agent returns to the Agent Idle mode.



Using Voice Consult

What is Voice Consult?

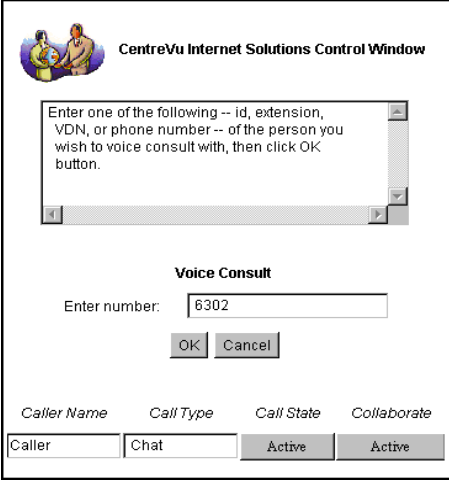
The Voice Consult feature allows an agent to consult with a third party, such as a subject-matter expert or a supervisor, during an Internet session. The customer cannot hear voice interaction between the agent and consultant unless the agent establishes a conference. However, if the consultant is a logged-in agent then all three parties participate in Web-based interactions such as text chat from the beginning of the consultation.

Important! The agent cannot real-time switch between customer and consultant. Attempting to do so could result in the loss of the customer's Internet session. Instead, the agent must either complete the consultation before returning to the interaction with the customer, or must establish a conference between the agent, the consultant, and the customer.

Voice Consult process

Here is how the Voice Consult feature works during an active Internet session:

- 1 The agent selects Voice Consult from the Options drop-down list. The Voice Consult controls appear, as shown in the following illustration:



The screenshot shows a window titled "CentreVu Internet Solutions Control Window". Inside, there is a text box with the instruction: "Enter one of the following -- id, extension, VDN, or phone number -- of the person you wish to voice consult with, then click OK button." Below this is a "Voice Consult" section with a label "Enter number:" and a text input field containing "6302". There are "OK" and "Cancel" buttons. At the bottom, there is a table with four columns: "Caller Name", "Call Type", "Call State", and "Collaborate". The table contains two rows: "Caller" and "Chat", both with "Active" in the "Call State" and "Collaborate" columns.

Caller Name	Call Type	Call State	Collaborate
Caller	Chat	Active	Active

- 2 The agent enters the number of the party to conference (this could be a telephone number, VDN, agent ID, or another number; see the help text in the session transcript window for instructions).

-
- 3** The agent clicks the OK button.
-
- 4** The consultation is established. The original Internet session's Call State becomes On Hold, and the customer cannot hear voice communication between the agent and the consultant (unless a conference is established). If the consultant is also a logged-in agent, this agent participates in the Web-based portion of the session from the beginning of the consultation, and the original agent may transfer the session completely to the consultant.
-
- 5** Before returning to the customer, the agent must do one of the following:
- Disconnect the consultant. The original Internet session with the customer automatically switches Call State from On Hold to Active.
 - Establish a conference between agent, customer, and consultant by selecting Conference from the Options drop-down list. The Conference controls appear, automatically populated with the extension of the consultant. (Note that the agent cannot edit this number, because the only conference allowed during a Voice Consult is with the consultant.) The agent then clicks OK to establish the conference.



Using Join Us

What is Join Us? The Join Us feature allows a third party with Internet access to join an in-progress Internet session. Either the agent or the customer communicates a session-specific handle to the third party, who uses the handle to log in to a Join Us page. A Join Us applet, similar to the Caller Control Window, then downloads to the third party's browser. The joining party can then participate in Web-based collaboration with the agent, the original caller, and any other joined parties.

There are two things to note about the Join Us feature:

- The maximum number of parties that can join a single Internet session through the Join Us feature is limited only by available system resources.
- Only the agent and the original customer can use Telepointer; parties that have joined an Internet session cannot use (or see) the Telepointer.

Join Us process Here's how the Join Us process works during an active Internet session:

1 The agent selects Join Us from the Options drop-down list. The Join Us controls display.

2 The agent enters a unique handle to identify the current session (see the help text in the session transcript window for instructions). This handle is reserved by the system until the joining party uses it to log in, after which the handle is again available to any agent.

(Note: If the Internet session drops after the agent reserves the Join Us handle but before the joining party logs in, then the handle is freed by the system and is available for use by any agent.)

3 The agent clicks the OK button.

4 The agent calls the joining party on the telephone. Using the Conference feature, the original customer can participate in the next step.

-
- 5** The agent (and/or the original customer, using the Conference feature) informs the joining party that they are invited to participate in a Web-based collaboration, and gives the joining party the following information:

- The URL of the Join Us Web page
 - The session's unique handle
-

- 6** The joining party accesses the Join Us Web page, as shown in the following illustration:

CentreVu Internet Solutions

Join Us in a Web Collaboration Call

To join us in a collaborative call, enter your information and press the join button.

Call Handle:

Your Chat ID (no spaces please):

Your Name:

-
- 7** The joining party completes the fields on the Join Us Web page and then clicks Join Us.
-
- 8** After the third party joins the Internet session, the agent, original customer, and joining party can participate in Web-based collaboration.



Drop Internet sessions

Overview

Purpose The following information describes the methods used to drop Internet sessions. There are several ways for the agent and customer to drop Internet sessions; different methods may impact what part of a session drops.

Contents The following information is described:

- Methods for dropping Internet sessions (8-31)
- Methods for dropping callbacks (8-32)

Methods for dropping Internet sessions Voice and chat and text chat-only sessions may be dropped using one of the following methods:

- Either the agent or the customer can drop the entire Internet session by clicking using the Drop Call command in the Control Window. In this case, the agent returns to the Agent Idle state.
- If either the agent or the customer closes the Web browser during an Internet session, the entire session is dropped.
- The agent can drop the entire Internet session by hanging up the voice terminal or by pressing the Release button (if your voice terminal is administered with a Release button).

When an Internet session is dropped with any of the above methods, a JavaScript alert dialog box will appear with the following message:
Press OK to Quit.

NOTE: Although it is not recommended, if the agent or the customer closes the Control Window during an Internet session, the entire session is dropped.



Methods for dropping callbacks

Dropping caller-initiated callbacks

The agent or customer can drop a caller-initiated callback by hanging up the telephone or voice terminal. The agent may also use the Drop Call command in the Agent Control Window.

Dropping agent-initiated callbacks

During an agent-initiated callback, the following drop call scenarios are handled as indicated:

- Customer hangs up the phone—only the telephone portion of the session is dropped. The original Internet session is not terminated and Internet voice (if applicable), text chat, escorted browsing, and HTML forms sharing are still available.
- Customer closes the Caller Control Window or clicks on the Drop Call button—the entire session is dropped and the agent returns to the Agent Idle state.
- Customer exits the Web browser—the entire Internet session is dropped and the agent returns to the Agent Idle state.
- Agent releases with the voice terminal—the telephone portion of the session is dropped. Internet voice (if applicable), text chat, escorted browsing, and HTML forms sharing are still available. The agent must again use the release feature to end the entire session.
- Agent selects the Drop Call command in the Agent Control Window.
- The system offers the following options:
 - Drop Entire Call—drop the entire session and return to the Agent Idle state
 - Drop Call Back—drop only the telephone portion of the session and continue with Internet voice (if applicable), text chat and escorted browsing.
 - Drop IP Voice—drop only the Internet voice portion of the session and continue with the telephone, text chat, and escorted browsing portions. This option is useful when the agent hears an echo due to the two voice elements of the session (IP voice and telephone).
 - Cancel—cancel the drop call request

If for some reason an agent-initiated callback does not go through (such as a busy signal), the agent can select the Drop Call command.

Selecting the Drop Call command provides the following options:

- Cancel—cancel the drop call request
- Drop Call—drop the entire session and return to the Agent Idle state
- Drop Callback—drop only the telephone portion of a session and resume using the Internet voice (if applicable), text chat and escorted browsing features.

Dropping callback and collaborate sessions

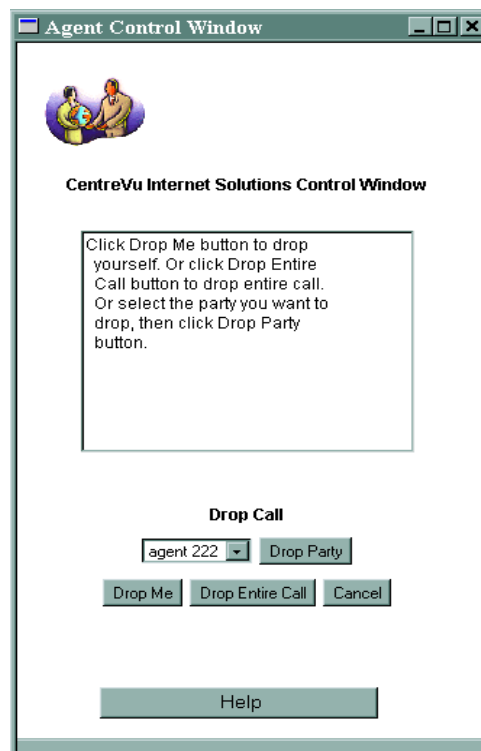
Either the agent or the customer can drop the entire session by doing the following:

- Selecting the Drop Call command in the Control Window. In this case, the agent returns to the Agent Idle state.
- Closing the Web browser

Either the agent or the customer can drop the telephone portion of the session by hanging up the telephone or voice terminal.

Dropping conferences

Selecting Drop Call during a conference presents the agent with several choices, as shown in the following figure:



When dropping a conference, the agent may:

- Drop himself/herself by clicking the Drop Me button. In this case, the agent returns to the Agent Idle state and the other parties in the conference continue to communicate.
- Drop another party by selecting that party from the drop-down list and then clicking the Drop Party button. In this case, the agent continues to communicate with parties remaining in the conference.
- Drop the entire session by clicking the Drop Entire Call button. In this case, the agent returns to the Agent Idle state.



9 How to process messages

Overview

- Purpose** This section describes how an agent handles various types of messages and also describes the functionality provided by the messaging software to handle those messages.
- Important** The information in this section is based on Web pages delivered with the messaging software. If you choose to modify messaging Web pages, then this chapter may no longer apply. In addition, modifications to messaging Web pages may affect the functionality of the product. Therefore, any modification of messaging 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 (9-2)
 - Message processing Web pages (9-14)
 - Handling undeliverable messages and notifications (9-63)



Message processing background information

Overview

Purpose The messaging software enables customers to contact your contact center by various forms of email. For example, if your contact center has published an email address and the email address is routed to a mailbox monitored by the messaging software, then a customer 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 messages The following information describes some types of email messages that can be used to generate messages supported by the messaging software:

- Form-based email (file attachments supported)—a form-based email is a form provided by the contact center that the customer fills out and then submits. See *Forms-based email (2-32)* for more information.
- 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 customer. This email may be in response to a link in a Web page or may be independently composed by the customer.

Inbound fax message calls Inbound fax messages may be distributed through the messaging software if your fax server supports retrieval of the fax through Post Office Protocol 3 (POP3). To use faxes with the messaging 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.

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
The operations of a fax message are as follows: 1. After you answer the message call, a PagePop associated with the fax message is delivered to you. 2. The message contains a file attachment which contains the fax image. 3. You must click on the file attachment to view the fax message. 4. Reply—You must use a third-party utility provided by the contact center to compose and send a fax response. The original fax image (not the newly created, annotated, or modified fax image) is stored in the message database. 5. You must mark the original fax message as closed (with a reason code) to complete the processing. If you used a third-party utility to compose a fax reply, you must still close the original fax message in the messaging software to complete the process.	The operations of an email message are as follows: 1. After you answer the message call, a PagePop associated with the email message is delivered to you. 2. The message display contains the customer's return email address, the subject, the text body and possibly a file attachment. 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 messaging software tools to compose a reply. 5. You must mark the original email message as closed (with a reason code) to complete the process.



Message processing cycle

Overview All 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 messaging software retrieves a message from the POP3 mail server and ends when the message is placed in the Closed state (see *Message states (9-9)* 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, and ends when you close or suspend the associated message. It is important that you keep the message call active at your telephone; if you hang up the message call, the messaging 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 telephone.

The messaging software provides specific functionality that you can use to process messages. This functionality is accessible through the messaging Web pages.

Phases of the message processing cycle

Important! All processing of a message should take place through your Web browser and the messaging tools.

- 1** Log into begin receiving message calls and the messages associated with those message calls, you must log in to the messaging 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 telephone. Accept the message call by answering it from your telephone. When you answer the message call, the messaging 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 customer'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-enabled agent or skill group (transfer).
- Create and send a reply to the customer.
- Request help before replying to the customer.
- 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 database.
- Annotate the message.
- Display help information about the messaging Web page and processing options.

-
- 4** Message release—when you have finished processing the message, the *DEFINITY* ECS releases the message call and you become available to receive another call. Based on the workload of your contact center and your agent skills, your next call may be another message call or an Internet session.



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 telephone.

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 messaging Web pages are fully loaded before selecting an option?

For best results, you should wait until your browser fully loads the messaging Web page before selecting an option on that Web page.

Can there be more than one active agent for a single message call?

No; a message can be active with only one agent at a time. However, other agents may view a message when the message is active.

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 properly closed (for example, if you hang up the telephone instead of selecting the Close option), the messaging software will return the message (by way of a message call) to the VDN specified in message administration. This may result in the message being delivered to another agent. See the Close Message Web page (9-61) 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 messaging functionality (that is, use the `Close` or `Suspend` options). If you release a message call with functionality other than that provided by the messaging software (for example, hanging up the telephone), the messaging software will not be aware of the release and will attempt to redeliver the message call to another agent.

Can I print a message?

You can print a message by printing the messaging Web pages that contain the specific information you want to print. To print a messaging Web page, use your browser's `Print` function.

Because the messaging 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 messaging 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?

Yes. To transfer a call while active on a message, use regular telephone 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?

Yes. To conference a call while active on a message, use regular telephone conference procedures. The messaging 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 browsers cannot display a received text message greater than 30K bytes (approximately 7500 words) in the messaging applet. If you are using a *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?

The messaging software 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 messaging 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 the messaging software. You may have to put yourself in an unavailable ACD state to disable call delivery until you are logged in to the messaging software.

Can I surf the Web using the browser window that displays a messaging Web page?

For best results and so that you do not inadvertently close the main messaging 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 Internet Explorer* or the Navigator Window item for *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 the messaging software 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 messaging software:

Option	Description
Blocked	The messaging software places a message in the Blocked state if the following conditions are true: • The Junk Mail Screening 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. When a message is blocked, the messaging 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.
Overflowed	The messaging 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 message server and the <i>DEFINITY</i> ECS (as administered in Message Care) is reached. Overflowed calls must wait in a queue until processing resources become available.
Launched	The messaging 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.

Option	Description
Active	The messaging 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 telephone. Agents may not modify, but can read, an Active message being processed by another agent.
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 messaging 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 message process cycle.



Message processing options

Introduction The messaging software provides a number of message processing options. These options are presented on the toolbar of the messaging Web pages. Some of the processing options can be administered to better meet your contact center's needs.

The following table lists the processing options provided by the messaging software:

Option	Application
Reply	Use the Reply option to send a reply to the customer. See Message Care Reply Web page (9-18) to learn how to reply to a customer'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 customer reply. See Message Care Forward Web page (9-28) to learn how to forward a message.
Suspend	Use the Suspend option when you want to delay the processing of a message for a specified amount of time. See Suspend Message Web page (9-25) to suspend an active message.
History	Use the History option when you want to view a chronological record of message processing details. See Message History Web page (9-42) to learn more about the History Web page.
Search	Use the Search option when you want to find specific messages in the messaging 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 (9-36) to learn how to search for a message.
Note	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 (9-46) to learn how to create a note while you are active on a message.

Option	Application
Send	Use the Send option when you are ready to send a reply to a customer 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 (9-55) to learn more about this option.
Cancel	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.
Save	Use the Save option when you want to save your reply or save your forwarded message. Situations that may warrant a save are: • Incoming real-time calls (telephone or Internet session) 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. 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. The messaging software will present all data saved for a message. If you use the messaging 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.
Close	Use the Close option to complete the processing of a message (all messages must eventually be closed). 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 (9-61) to learn how to close an active message.

Option	Application
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, or 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 (9-53) 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 (9-63) 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 messaging software conducts a search and provides a list of messages that you suspended.
Snap-Shot Report	Use the Snap-shot Report option to generate a real-time report. See Real Time Snap-Shot Report Web page (9-57) for more information about Message Care reports.



Message processing Web pages

Overview

Purpose The messaging 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 messaging 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 (9-11) 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) (9-15)
- New Message Web page (9-16)
- Message Care Reply Web page (9-18)
- Suspend Message Web page (9-25)
- Message Care Forward Web page (9-28)
- Message Search Web page (9-36)
- Message History Web page (9-42)
- Message Care Note Web page (9-46)
- Message View Web page (9-48)
- Retrieve Acknowledgment Web page (9-53)
- Send Acknowledgment Web page (9-55)
- Resent Acknowledgment Web page (9-56)
- Real Time Snap-Shot Report Web page (9-57)
- Close Message Web page (9-61)



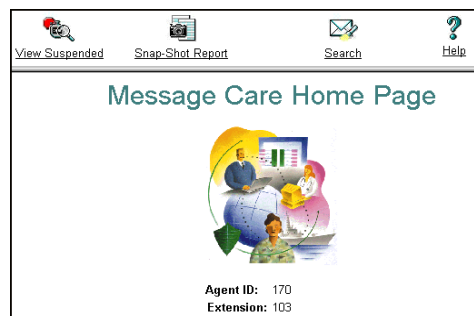
Message Care Home Page (agent idle page)

About After you have logged in to the *DEFINITY* ECS and the messaging 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

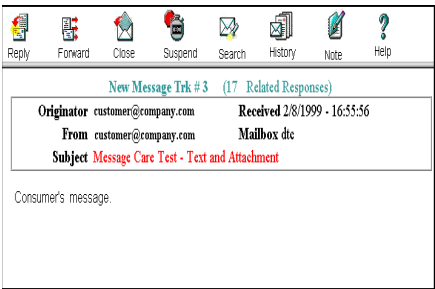
Illustration The following illustration is an example of the *Message Care* agent idle page:



New Message Web page

About A message is delivered to you when you answer a message call from your telephone. When you answer the message call, the messaging software displays 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)	This field is a numeric value (up to eight digits) automatically generated by the messaging 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 messaging software uses the tracking number to handle messages. As an agent, you can use tracking numbers to find specific messages by searching on a message’s tracking number. A customer could use a tracking number to reference an email correspondence.
Mailbox	This field identifies the “friendly name,” as administered in the messaging software, for the mailbox that received the message.
Originator	This field identifies the name of the person (agent or customer) who created the message.
From	This field identifies the email return address of the originator. The messaging software uses this email address to populate the To field in a reply message.

Field	Description
Subject	This field provides the subject of the message.
Received	This field provides the time and date the message was retrieved by the messaging software.
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 its link. To view file attachments, you must have associated helper applications. 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 customer, messages forwarded to other people (for example, an SME or an agent), and messages sent by the customer. 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 customer. If this area is blank, then the message is most likely a fax message, especially if there is a file attachment.

New message processing

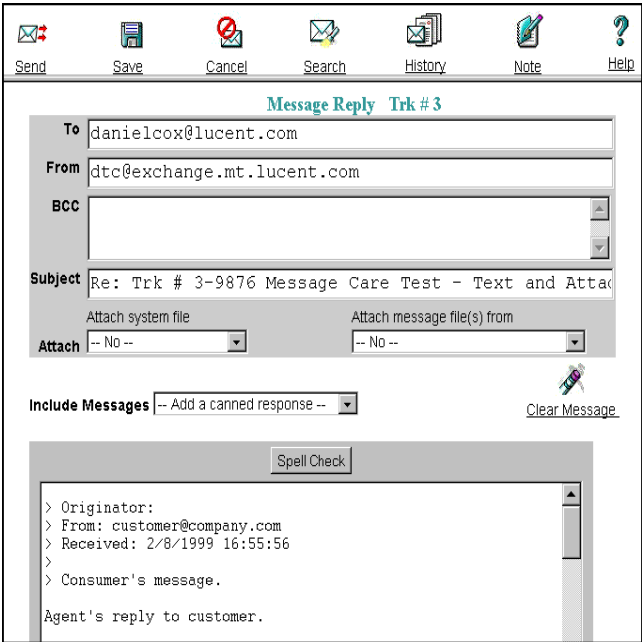
From the New Message Web page, determine how you want to process the message. For example, you may know exactly how to reply to the customer; therefore, you can use the Reply option to compose a reply and send it to the customer; or, you may want to search the history database prior to creating your 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 customer.



Message Care Reply Web page

Introduction You must be the active agent on the message to compose a reply. If you are the active agent, then you can click on the Reply button and the Message Care Reply Web page will appear. From the Message Care Reply Web page, you can reply to the customer’s request by composing a reply and then sending that reply to the customer. For example, you may want to keep your customer informed about the status of their request. In this case, you could use the Reply option to send your customer 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:



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	This field identifies the email address where the messaging software will send your reply. This field is automatically populated with the “From” information associated with the original message. You can edit this field. NOTE: If the messaging software is running in J-Mode, then you must use the ASCII character set to enter the To address (<i>customer@company.com</i>).
From	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.
BCC	This field is a blank field used to enter additional recipients as blind copies. Use this field if you want to send your reply to additional recipients but do not want to show your customer the email list of additional recipients. Before using the BCC field, ensure that your Simple Mail Transfer Protocol (SMTP) server supports blind copies.
Subject	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. You can edit this field; however, if you modify or remove the subject (especially the Trk #), the messaging software will not be able to link a customer response with the original message. The messaging 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.
Attach system file	This field is a drop-down list box providing file attachments that you can include in your reply. You can select only one file attachment to 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 file attachment.
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 SME's 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 file attachment.

Field/Button	Description
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.
Spell Check	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 messaging agents. NOTE: The messaging software supports spell check in US English only. If you log in to the system in a language other than US English, the messaging software disables the Spell Check button.
Text Box	This field is a standard text box that provides basic text input with editing support. Editing includes the insertion or deletion of characters. The text box is where you compose your reply to the customer. 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.

Things to know about replying to a message

The following subjects provide information about how the messaging software handles replies to original message calls:

- How do I distinguish between original message text and added text? (9-21)
- Can I use copy and paste commands? (9-21)
- Do I get a return receipt when I send a reply? (9-21)
- What type of information is stored when I reply to a message? (9-22)
- What type of information is required when I reply to a message? (9-22)
- What if my reply submission fails? (9-22)
- What happens if I close the original message before I reply to the customer? (9-22)
- How does the Save option work when replying to a message? (9-22)

How do I distinguish between original message text and added text?

By default, the original message text received from the customer 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.

Important! 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 messaging software will not request a return receipt from the SMTP server.

What type of information is stored when I reply to a message?

The messaging 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 messaging 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 customer, 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 messaging 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 contact 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 customer's email address located in the To field is correct. If not, enter the correct email address. For example, you may notice that the customer entered their email address incorrectly (customer@avay.com instead of customer@avaya.com) when entering information in a form created by your contact center.

-
- 3 Your administrator presets the From field email address, and in most instances this 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.
Netscape Navigator users: after inserting a canned response in the compose box, the position of the cursor, which normally should be after the inserted text, is sometimes located somewhere between the added text. If you want to add text after you have added a canned response, click in the desired position and begin typing.
- 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.

Result: The Send Acknowledgment Web page appears stating that your message was sent. See Send Acknowledgment Web page (9-55) 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 You must be the active agent on the message to suspend it. If you are the active agent, then you can click on the Suspend button and the Suspend Message Web page will appear.

When you suspend a message, you are delaying the completion of that message for a specified period of time and requesting that the messaging 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 (telephone calls or Internet sessions) 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, the messaging software 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, the messaging software drops the message call associated with that message. The ACD work state that you are placed in when a message call is dropped depends on *DEFINITY* ECS station administration.

When you suspend a message, the messaging software 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, the messaging software 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, the messaging software informs you of the response and allows you to cancel the suspension of the message.
- When the suspension time has elapsed, the messaging software 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 messaging 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 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. The first choice in the drop-down list box (Select One) is explanatory only and not a valid choice.
-

- 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: The messaging software 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 You must be the active agent on the message to forward it. If you are the active agent, then you can click on the Forward button and the Message Care Forward Web page will appear. From the Message Care Forward Web page, you can forward a copy of the customer's original message to people other than the customer.

Why forward a message?

You may want to forward a copy of the customer's original message to a Subject Matter Expert (SME), another agent, or to another contact center to request information about or help with the customer's original message. When you forward a copy of the customer's original message, you can also include your own comments in the message as well as a contact center file attachment.

What happens when you forward a message?

When you forward the customer's original message, you are still the active agent on the message. This is because you are forwarding a copy of the customer's original message.

After you have forwarded a copy of the original message, you can suspend the active message to wait for an answer or to process other messages.

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

The screenshot shows a web application window titled "Message Forward Trk # 3". The interface includes a toolbar at the top with icons for Send, Save, Cancel, Search, History, Note, and Help. Below the toolbar, there are several input fields and buttons:

- To:** A dropdown menu with "Agent1" and "Agent2" selected. A note above it says "(Ctrl Click for multiple selection) and/or (Type To address below with comma separated)".
- From:** A text field containing "agent@call_center.com".
- Subject:** A text field containing "Fwd: Trk # 3-9876 Message Care Test - Text and Att".
- Attach:** Two dropdown menus, both set to "-- No --". Above them are labels "Attach system file" and "Attach message file(s) from".
- Include Messages:** A dropdown menu set to "-- Add a canned response --".
- Buttons:** "Clear Message" and "Spell Check".

At the bottom, there is a text area containing the following text:

```
> Originator:
> From: customer@company.com
> Received: 2/8/1999 16:55:56
>
> Consumer's message.

Agent's forward message to SME to request help on the
consumer's original message.
```

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	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. Because commas are used to distinguish between multiple addresses, the messaging software does not support email addresses containing commas. You can edit this field. NOTE: If the messaging software is running in J-Mode, then you must use the ASCII character set to enter the To address (<i>customer@company.com</i>).
Subject	This field contains the prefix Fwd: (indicates a forwarded message), the original message call's Trk #, and original subject text. You can edit this field; however, if you modify or remove the subject (especially the Trk #), the messaging software will not be able to link a customer response with the original message. The messaging software 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.
Attach system file	This field is a drop-down list box providing file attachments that you can include in your forward message. You can select only one file attachment to 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 system file attached.
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 file attachment.

Field/Button	Description
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 contact 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.
Spell Check	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 messaging agents. NOTE: The messaging software supports spell check in US English only. If you log in to the system in a language other than US English, the messaging software disables the Spell Check button.
Text Box	This field is a standard text box that provides basic text input with editing support. Editing includes the insertion or deletion of characters. The text box is where you compose your forwarded message to the customer. 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.

Things to know about forwarding a message

The following subjects provides information about how the messaging software handles forwarded messages:

- Is my return address used when I forward a message? (9-31)
- Can the recipient of my forward message reply to the customer? (9-31)
- How do I distinguish between original text and added text? (9-31)
- Can I use copy and paste commands? (9-32)
- What forward information is stored by the messaging software? (9-32)
- What information is required to forward a message? (9-32)
- How do I know if I forwarded my message successfully? (9-32)
- What happens if I close the original message before forwarding it? (9-32)
- How does the Save option work when forwarding a message? (9-32)
- Can I save more than one forward message per original message? (9-33)

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 customer?

When you forward a message, the customer's email address is contained in the text body of the forwarded message. The recipient of the forwarded message can reply to the customer 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 customer 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 the messaging software?

The messaging software 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 messaging 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 messaging 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 contact center. For information about handling undeliverable messages, see Handling undeliverable messages and notifications (9-63).

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 customer's original message, do the following:

- 1 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 customer'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 canned response.

Netscape Navigator users: after inserting a canned response in the compose box, the position of the cursor, which normally should be after the inserted text, is sometimes located somewhere between the added text. If you want to add text after you have added a canned response, click in the desired position and begin typing.

- 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(s) of the recipient(s). See Send Acknowledgment Web page (9-55) 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 You do not need to be active on a message to search for it. 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. The messaging software presents the messages matching your search criteria through the Search Results Web page. You can view any message presented in the Search Results Web page; however, you can retrieve only those messages with a Launched, Suspended, Blocked, 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 customer's request
- To view suspended messages
- To search for messages from the same customer
- To reply to a customer using the same reply from a similar customer request

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

The screenshot shows the Message Search Web page interface. At the top, there are three icons: a magnifying glass labeled 'Conduct Search', a red X labeled 'Reset', and a question mark labeled 'Help'. Below these is the title 'Message Search' in green. The main area contains a form for searching messages. It starts with the instruction 'Perform a search by filling in fields for one or more categories below. (Use * for Wildcard)'. The form includes several input fields: 'Trk - Number' with a value of '3333', 'Agent ID', 'Mail Box' with a dropdown menu showing 'Any', 'Message Status' with a dropdown menu showing 'Any', 'Subject', 'Customer's Email Address', and 'Time Stamp'. The 'Time Stamp' section has a dropdown menu for 'Messages Received' and three radio button options: 'Any Time' (selected), 'During the previous 1 Hour(s)', and 'Between (DD/MM/YYYY) (Hr:Min)'. The 'Between' option is further detailed with two date and time fields: '03/06/1999 at 00:00' and '05/06/1999 at 12:08', separated by 'and'.

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 in 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.
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.

Field	Description
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? (9-38)
- Should I conduct a search on all messages in the database? (9-39)
- Can I use copy and paste commands? (9-39)

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)
- The messaging software 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, the messaging software 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 the messaging software will search on...
12345	the agent ID 12345 (exact match).
1234*	all agent IDs starting with 1234.
1*5	all agent IDs starting with 1 and ending with 5.
1234	all agent IDs containing 1234.
*1234	all agent IDs ending with 1234

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, the messaging software will alert you. When the messaging software alerts you, you will be able to continue the search using your original search criteria or you can cancel the search and refine your criteria.

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 the messaging software 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 contact 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 the 'Message Search' web page. At the top, there are three buttons: 'Conduct Search' (with a magnifying glass icon), 'Reset' (with a red arrow icon), and 'Help' (with a question mark icon). Below these buttons is the title 'Message Search' and a subtitle 'Perform a search by filling in fields for one or more categories below. (Use * for Wildcard)'. The form contains several input fields and a 'Database' selector. The 'Tracking Number' field has a text input with '*' and a dropdown with '1002'. The 'Agent ID' field has a text input with '*45'. The 'Mail Box' field has a dropdown with '601'. The 'Message Status' field has a dropdown with 'Closed'. The 'Subject' field has a text input with '*Automobile*'. The 'Customer's Email Address' field is empty. The 'Time Stamp' field has a dropdown with 'Messages Closed' and a radio button selected for 'During the previous' with a text input '8' and a dropdown 'Hour(s)'. There are also radio buttons for 'Any Time' and 'Between (MM/DD/YYYY) (HR:MIN)' with date and time inputs.

Conduct Search Reset Help

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

Tracking Number: * 1002 Database: ☒ Current ☐ Archive

Agent ID: *45

Mail Box: 601

Message Status: Closed

Subject: *Automobile*

Customer's Email Address:

Time Stamp: Messages Closed

☐ Any Time

☒ During the previous 8 Hour(s)

☐ Between (MM/DD/YYYY) (HR:MIN)

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

- 3 Click on the Conduct Search button. The messaging software 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:

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

- 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 (9-48) for more information about viewing a message.

END OF STEPS



Message History Web page

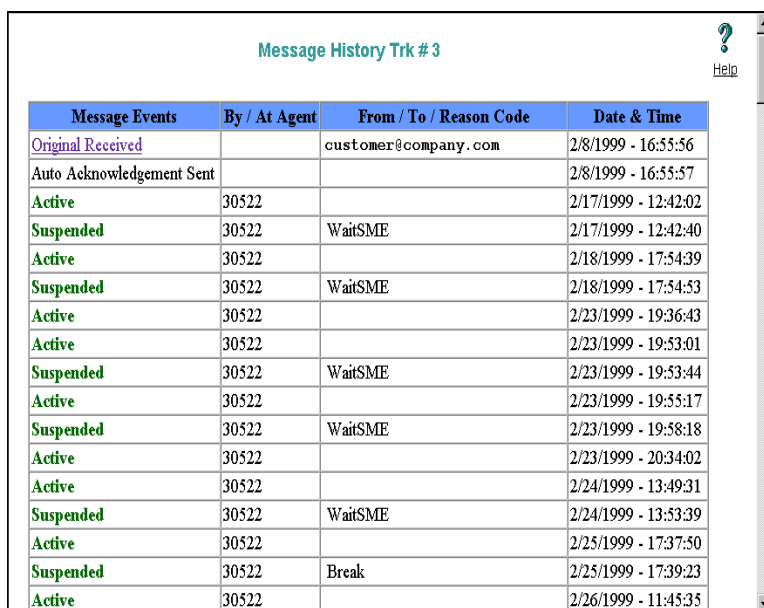
Introduction The Message History Web page appears when you click on the History button. The Message History Web page allows you to view a chronological record of message processing details. A message's history log displays the state and event changes a message has undergone along with the agent active 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:



The screenshot shows a web page titled "Message History Trk # 3" with a "Help" icon in the top right corner. Below the title is a table with four columns: "Message Events", "By / At Agent", "From / To / Reason Code", and "Date & Time". The table contains 17 rows of message history data, alternating between "Active" and "Suspended" status, with various dates and times from 1999.

Message Events	By / At Agent	From / To / Reason Code	Date & Time
Original Received		customer@company.com	2/8/1999 - 16:55:56
Auto Acknowledgement Sent			2/8/1999 - 16:55:57
Active	30522		2/17/1999 - 12:42:02
Suspended	30522	WaitSME	2/17/1999 - 12:42:40
Active	30522		2/18/1999 - 17:54:39
Suspended	30522	WaitSME	2/18/1999 - 17:54:53
Active	30522		2/23/1999 - 19:36:43
Active	30522		2/23/1999 - 19:53:01
Suspended	30522	WaitSME	2/23/1999 - 19:53:44
Active	30522		2/23/1999 - 19:55:17
Suspended	30522	WaitSME	2/23/1999 - 19:58:18
Active	30522		2/23/1999 - 20:34:02
Active	30522		2/24/1999 - 13:49:31
Suspended	30522	WaitSME	2/24/1999 - 13:53:39
Active	30522		2/25/1999 - 17:37:50
Suspended	30522	Break	2/25/1999 - 17:39:23
Active	30522		2/26/1999 - 11:45:35

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? (9-44)
- What messages can I send from the History Web page? (9-44)
- What tells me that a message was transferred? (9-44)

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 the messaging software transferred the message.

View a message's history

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

-
- 1 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? (9-46)
- Do I have to manually save my note? (9-46)
- Do I have to manually close the Note Web page when I am done composing my note? (9-47)
- Do I have to enter carriage returns when composing my note? (9-47)
- How much text can I have in my note? (9-47)

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?

The messaging software 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.

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** 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



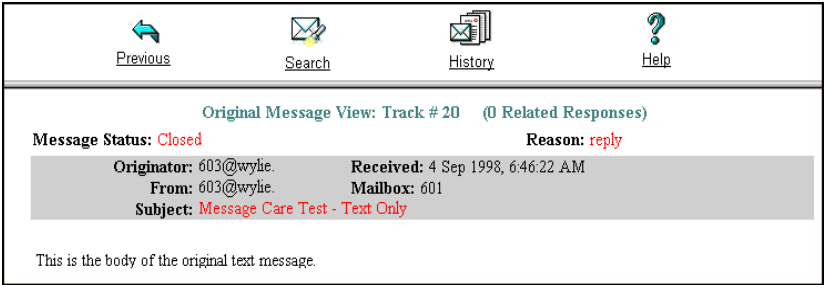
Message View Web page

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 customer
 - 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 Web page fields The following table describes the fields found on the Search Results View 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 last agent who worked on the message.
Originator	This field identifies the name of the person who created the message.

Fields	Description
From	This field identifies the email address of the originator. The messaging software uses this email address to populate the To field in a reply 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 are either prompted to open or save the attachment when you click on its link. 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.
Received	This field provides the time and date the message was retrieved by the messaging software.
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 customer. Use the History option to view related responses.
Mailbox	This field identifies the "friendly name," as administered in the messaging software, for the mailbox that received the message.
Text Box area	This field provides the actual message from a customer. 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:

 Previous
  Search
  History
  Close
  Help

Original Message: Track # 3 (0 Related Responses)

Message Status: **Received** Reason: Agent:
 Suspend Count: Touch Count: Retry Count:
 Speed Of Answer: 0 Processing Time: 0 Time: 4 Sep 1998, 3:48:56 PM

Originator:	postmaster@wylie.	Received:	4 Sep 1998, 3:48:56 PM
From:	postmaster@wylie.	Mailbox:	601
Subject:	the recipient address is invalid!		

Original message text.

Snapshot Report Results View Web page fields

The following table provides a description of the fields found on the 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 last agent who worked on the message.
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 the messaging software.
From	This field identifies the email address of the originator. The messaging software uses this email address to populate the To field in a reply message.
Mailbox	This field identifies the “friendly name,” as administered in the messaging software, for the mailbox that received the message.

Fields	Description
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. 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 customer, messages forwarded to other people (for example, an SME or an agent), and messages sent by the customer. Use the History option to view related responses.
Text Body area	This field provides the actual message from the customer. 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 messaging software:

- When can I view a message? (9-51)
- Can I modify a message while I am viewing it? (9-51)
- Does CMS gather statistics on a message that I am viewing? (9-52)
- Can I receive a new message while viewing an existing message? (9-52)

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, or 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 messaging 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? (9-53)
- Can I retrieve a message while on a live ACD call? (9-54)
- How can I ensure that a message I retrieve comes directly to me? (9-54)

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 the messaging software has facilities to launch the call.

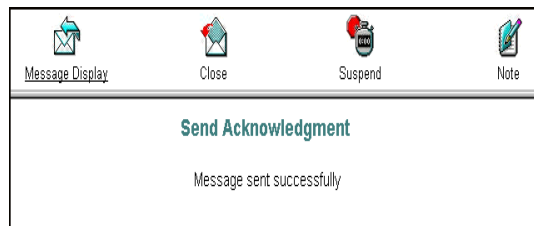
If you do not receive the message within 30 seconds, assume that the messaging software did not have the facilities to launch the call. At this point, you should resume processing other email messages.



Send Acknowledgment Web page

Introduction Whenever you send a message (Forward or Reply), the messaging 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 the messaging software 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 messaging 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? (9-57)
- How current is the data in a Snap-shot report? (9-58)
- Can I retrieve or view messages identified though a Snap-shot report? (9-58)
- Can I select multiple mailboxes as my criteria for a Snap-shot report? (9-58)
- Can I print a Snap-shot report? (9-58)
- Can I save a Snap-shot report? (9-58)
- Is there an unfavorable time to generate a Snap-shot report? (9-58)

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 messaging 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 messaging 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 mailboxes:


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[Help](#)

Real Time Snap-Shot Report

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

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

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 drilldown to the dtc mailbox was conducted):


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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

Report Result

Report: Messages in dtc

Tracking Number	Agent	Status	Received	Speed of Answer HR Min	Process Time Min Sec	Close Time HR Min	Touch Count	Retry Count	Suspend Count	Mailbox	Reason Code	Time Entered Status	Customer's Email Address
3	30522	Launched	2/8/1999 - 16:55:56	211 46	1980 58	- -	82	891	18	dtc		4/16/1999 - 09:21:24	cust@company.com
67	30522	Launched	2/19/1999 - 10:37:40	- 10	48 55	- -	28	276	9	dtc		4/16/1999 - 09:12:12	
13257	30522	Launched	3/25/1999 - 13:36:25	- 15	88 56	- -	14	168	2	dtc		4/16/1999 - 09:12:15	cust@company.com
13266	30522	Launched	3/29/1999 - 13:44:56	- 5	181 51	- -	11	166	2	dtc		4/16/1999 - 09:12:18	cust@company.com

**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

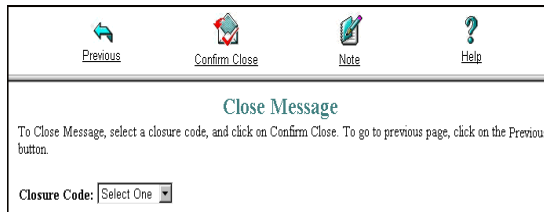
END OF STEPS



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 contact center uses reason codes to measure operating efficiency. You must select a reason code to close the message call.

What happens when I close a message?

The following takes place when you close a message:

- When the messaging software receives a request to close a message, it checks for any message response that was received while you were processing the message. If a response was received, the messaging software informs you of the response and allows you to cancel the message closure.
- When you close a message, the messaging software 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, the messaging software 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: The messaging software releases the call and the **Message Care Home Page** (or the administered idle page) appears. You are now available to receive a new message call.

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



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 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 customer, 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 customer'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 customer, 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 customer, 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 customer'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.



10 Reports

Overview

Purpose	The purpose of this section is to discuss the reporting capabilities of <i>CentreVu</i> Internet Solutions.
Audience	This information is intended for installers, system administrators, contact center supervisors, or anyone else involved in connecting, installing, administering hardware or software, setting up reports, or maintaining database items for <i>CentreVu</i> Internet Solutions.
Contents	The following items are discussed: • Background information (10-2) • Message reports (10-6)
References	The <i>CentreVu</i> Call Management Systems documentation contains additional information about <i>CentreVu</i> CMS or Supervisor.



Background information

Overview

Purpose The purpose of the background information is to provide you with information about the reporting capabilities of *CentreVu* Internet Solutions as well as the reporting capabilities of *CentreVu* CMS and Supervisor.

Contents The following areas are discussed:

- Reporting software (10-3)
- Messaging software (10-4)



Reporting software

Introduction Reports for *CentreVu* Internet Solutions are produced through the following:

- Messaging software—gathers statistics regarding the specifics of end-to-end message (email and fax) processing.
- *CentreVu* CMS and Supervisor—gathers statistics regarding call-traffic data.



Messaging software

Overview The messaging software provides several reports that focus specifically on end-to-end information about messages routed through the messaging software. These reports get 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 customer replies, information received 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 contact 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 customer contact.

The messaging software provides end-to-end tracking of the message process including the following message states:

- Overflowed
- Launched
- Active
- Suspended
- Closed
- Failed
- Blocked

Message processing statisticCMS versus the messaging software 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. The messaging software 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 the messaging software 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 reports display the following statistics:

- Total agent work time for a specific message call. Even if that message call was touched by multiple agents, the messaging software will track the total work time of 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 messaging 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 the messaging software.
- The messaging software may initiate multiple message calls in the handling of a message. For example, once a message call is suspended, the messaging software launches a new message call each time it goes into the queue again. Messaging 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.

□

Message reports

Overview

Purpose The purpose of this section is to provide information about message reports.

Contents The following areas provide information about message reports:

- Introduction to message reports (10-7)
- Objective Report (10-10)
- Closure Code Report (10-13)
- Mailbox Report (10-16)
- Messages Arrived Monthly Report (10-21)
- Agents Correspondence Report (10-23)
- Real Time Snap-Shot Report (10-25)
- Supervisory search (10-26)

Audience This information is intended for system administrators, contact center supervisors, or anyone involved in setting up reports or maintaining database items.



Introduction to message reports

Types of reports	Message 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 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 reports for messaging	The messaging software is not designed to allow customizing of reports and, therefore, you are not expected to modify the standard reports provided with the messaging software. If you have different reporting needs, you may elect to write your own reports, using the schema published by Avaya. 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 (9-57).
Report options	The following options appear on every report you generate: • Previous • Reports Menu • Help

Notification of archive

Message 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 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 report to a file.

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

Print reports

You can print a message 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, the number 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 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 messaging software’s 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:

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

Archive Started: 2/4/1999 - 23:44:46Archive 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	-	- -	- -	-	-
dtc	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	-	- -	- -	-	-

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 mailboxes, define a period between two dates and times (both hour and minutes) during 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 contact center has multiple archives, then you can specify the archive from 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 the messaging software 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 >1t—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 must select a reason. 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 specified mailbox, the messaging software will search all closure codes and generate a report that lists the number of times a specific closure code was found 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:


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[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

Closure Code Report

Report Generated on 4/16/1999 - 13:28:38

For Message Closed Between 2/16/1999 - 00:00:00 and 4/16/1999 - 13:28:00

Mailbox	Closure Code	Code Count	ASA HR Min	Average Process Min Sec	Average Close HR Min	Touch Count > 1
dtc	Junk	10	112 31	3 48	220 22	5
	No Reply	91	64 1	10 13	412 49	70
	ReplySent	6	99 27	8 44	191 27	6
mcdev1	No Reply	4	161 35	- 19	177 12	2
	Super	2	- 4	5 52	96 59	:

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 mailboxes and define a between period (between two dates and times) during which the messages were closed.
- 3 Select the database (Current or Archive) from which you want to produce the report. If your contact center has multiple archives, then you can specify the archive from 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 the messaging software used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence from a customer or replies to inquiries from SMEs within the contact center. Any messages arriving in a mailbox are delivered to the agent through a DAC, thus collecting CMS statistics.
- Closure Code—contact-center-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 message conditions for the mailbox(es) and time period you requested. It includes data on messages having an Overflowed status, including the amount of time the messages 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:

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 Mail Box Report Report Generated on 4/16/1999 - 13:32:06 For Message Closed Between 2/16/1999 - 00:00:00 and 4/16/1999 - 13:32:00 <table><tr><th>Mailbox</th><th>Closed</th><th>ASA HR Min</th><th>Average Process Min Sec</th><th>Average Close HR Min</th><th>Touch Count > 1</th><th>Retry Count</th><th>Suspend Count</th><th>Blocked Count</th><th>Failed Count</th></tr><tr><td>56401-on-drinit</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>dlc</td><td>107</td><td>70 32</td><td>9 32</td><td>382 26</td><td>81</td><td>23135</td><td>23</td><td>61</td><td>15</td></tr><tr><td>Forward-Monitored Ma</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>mcdev1</td><td>6</td><td>107 45</td><td>2 10</td><td>150 28</td><td>2</td><td>456</td><td>2</td><td>8</td><td>-</td></tr><tr><td>mcdev2</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>pab3</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>pam</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>pats-testing-mailbox</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>sales</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>test-exchange</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></table>										Mailbox	Closed	ASA HR Min	Average Process Min Sec	Average Close HR Min	Touch Count > 1	Retry Count	Suspend Count	Blocked Count	Failed Count	56401-on-drinit	-	-	-	-	-	-	-	-	-	dlc	107	70 32	9 32	382 26	81	23135	23	61	15	Forward-Monitored Ma	-	-	-	-	-	-	-	-	-	mcdev1	6	107 45	2 10	150 28	2	456	2	8	-	mcdev2	-	-	-	-	-	-	-	-	-	pab3	-	-	-	-	-	-	-	-	-	pam	-	-	-	-	-	-	-	-	-	pats-testing-mailbox	-	-	-	-	-	-	-	-	-	sales	-	-	-	-	-	-	-	-	-	test-exchange	-	-	-	-	-	-	-	-	-
Mailbox	Closed	ASA HR Min	Average Process Min Sec	Average Close HR Min	Touch Count > 1	Retry Count	Suspend Count	Blocked Count	Failed Count																																																																																																														
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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 mailboxes and define a period (between two dates and times) during which the messages were closed.
- 3

Select the database (Current or Archive) from which you want to produce the report. If your contact center has multiple archives, then you can specify the archive from 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 the messaging software used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence from a customer or replies to inquiries from SMEs within the contact 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 has gone through multiple active states. This may result from a message returning from a suspended state more than once or a message being transferred more than once.
- 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; 112 AM and 112 PM.

Illustration The following illustration displays a sample Messages Arrived Daily Report:

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

Message Arrived Daily Report

Report Generated on: 4/16/1999 - 13:34:17

For Messages Arrived on 4/16/1999

Mailbox	Hour																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
56401-on-drintuit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
dtc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Forward-Monitored Ma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mcdev1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mcdev2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pab3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pats-testing-mailbox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
test-exchange	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UNIX msgcare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ut3mm2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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 mailboxes and specify a date on 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 contact center has multiple archives, then you can specify the archive from 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 the messaging software used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence from a customer or replies to inquiries from SMEs within the contact center.
- Hours



Messages Arrived Monthly Report

Description The Messages Arrived Monthly Report displays the arrival rate for all messages that arrived in 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:

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

Message Arrived Monthly Report

Report Generated on: 4/16/1999 - 13:35:36

For Messages Arrived in Apr, 1999

Mailbox	Apr, 1999																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
56401-on-drntuit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
dtc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Forward-Monitored Ma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
mcdev1	-	7	2	-	-	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
mcdev2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pab3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pats-testing-mailbox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
test-exchange	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
UNIX msgcare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ut3mm2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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 mailboxes, 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 contact center has multiple archives, then you can specify the archive from 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 the messaging software used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence from a customer or replies to inquiries from SMEs within the contact 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 customer 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 an 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) during which the messages were sent.
- 3 Select the database (Current or Archive) from which you want to produce the report. If your contact center has multiple archives, then you can specify the archive from 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



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	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.
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. 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.

Field	Description
Mail Box	Use this search category when you want to search for a message(s) that arrived in a specific mailbox. For example, you may want to search for all messages that were sent to your Technical Support mailbox. The default is Any.
Message Status	Use this search category when you want to search for messages with a specific status. For example, you may want to search for all messages in the Failed state. The default is Any.
Subject	Use this search category when you want to search for messages containing specific text in the subject field. For example, you may want to find all messages regarding a specific product. The Subject text box can be populated with up to 128 alphanumeric characters (including wildcards). However, after 40 characters the text scrolls to the right. The default is no value.
Customer's Email Address	Use this search category when you want to search for messages from a specific email address. For example, you may want to find all messages that have come from <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.
Time Stamp	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. You can use wildcards in any field that you can edit in the Message Time category. The default is Any Time. Any Time refers to all messages received or closed regardless of the date and time.

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



11 CentreVu Internet Solutions databases

Overview

- Purpose** *CentreVu Internet Solutions Databases* describes databases used by *CentreVu* Internet Solutions.
- Audience** This information is intended for installers, system administrators, contact center supervisors, or anyone else involved in connecting, installing, administering hardware or software, setting up reports, or maintaining database items for *CentreVu* Internet Solutions.
- Contents** The Message Care Archive database (11-2) is discussed in this section.



Message Care Archive database

Overview

Purpose This section presents information about the *Message Care* archive database.

About message databases The message 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 messages which have entered closed, blocked or failed status and subsequently have 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:

- Archive database schema for messaging (11-3)
- Customizing the archive database (11-12)

Audience This information is intended for system administrators, contact center supervisors, or anyone involved in setting up report formats or maintaining database items.



Archive database schema for messaging

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—the original message including tracking number, subject, text, header information, and file attachments
- Current State—the status of the message
- Responses Sent/Outbound Data—the outbound messages (does not include auto-acknowledgments) created by agents and sent to the customer or messages forwarded to SMEs within your organization
- Responses Received—responses from SMEs and the customer
- Agent Notes—notes created by an agent
- Message History—history which includes timestamps and, where relevant, agent IDs for each event
- Agent “Workbench”—stores messages saved by the agent.

Structure of the message archive database

The message archive database has the ODBC Data Source name “Message Care SQL Archive.” Within the message Database, message data is organized in the following tables:

- Messages Table (11-3)
- Attachments Table (11-8)
- Outbound Table (11-8)
- Notes Table (11-9)
- Events Table (11-10)
- Workbench Table (11-11)

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.

The messaging software 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	Description
MsgID#	Integer (long)	The 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	The Message mime type.
CharSet	Text 32	Stores the message Character Set (for example, ISO-8859-1).
TrackingNumber#	Text 8	Each message has a tracking number which is used to identify related messages. The tracking number for “original messages” is a mathematical function of the ID (for example, ID modulus 100,000,000). For “related messages,” the Tracking number is found in the Message Subject (since that is the definition of a related message).
SiteID	Text 4	Detects when the entry was put in the database.
DetectionTime	Date/Time	When the entry was put in the database.

Name	Type/Size	Description
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	The subject in the message.
Headers	Memo	The complete list of Headers from the Message.
Body	Memo	The body of the Message.
MessageDate	Text 50	The date in the message header, usually the date/time the message was sent
MessageHeaderID	Text 128	Most SMTP servers put a unique ID in the message header. Using this field will help determine whether the messaging software 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	The 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.

Name	Type/Size	Description
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
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	Indicates “Yes” if a partial reply composition was saved in the workbench.
WorkbenchForward	Yes/No	Indicates “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).

Name	Type/Size	Description
The following fields are primarily for reporting purposes.		
RetryCount%	Integer (short)	The number of times the messaging software tried to make a call for this message.
SuspendCount%	Integer (short)	How often this message was suspended.
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	A Reserved field, currently not used.
ReserveInt2	Integer	A Reserved field, currently not used.
ReserveText1	Text 16	A Reserved field, currently not used.
ReserveText2	Text 16	A 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	A image attachment; can contain 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)	The ID of the message that has attachments included for reply/forward.
AgentID	Text 32	The agent who sent the reply or forward.
Timestamp	Date/Time	The time this reply was sent.

Name	Type/Size	Purpose
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	The name of the attachment sent with the message.
OriginalAttachments	Yes/No	Indicates whether original message attachments were sent with this message.
FromAddress	Text 255	The return address of the mailbox from which the mail was sent.

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).
AgentID	Text 32	The 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).
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 each 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).
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 the attachment sent with the message.
OriginalAttachments	Yes/No	Indicates whether the original message attachments were sent with this message.

Customizing the archive database

Important! Information about database customization refers only to the archive database. Under no circumstances should you attempt to edit the active messages database.

The messaging software supports the individual retrieval of each stored message. By using the Archive database schema for messaging (11-3), you can retrieve specific pieces of correspondence associated with a message record (for example, you may wish to retrieve only responses from the customer). These customer responses can then be extracted for storage into an internal customer 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 for porting it to an internal database.

Things to know about managing the archive database

The messaging software 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 databases, these activities should be undertaken only by personnel who possess appropriate training and knowledge of the *Microsoft SQL-Server* database management system.

Searching multiple archives

The search capabilities provided by the messaging 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 (12-30).



12 Monitor and maintain CentreVu Internet Solutions

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 *CentreVu* Internet Solutions.
- Contents** This section contains information about the following:
- Monitoring and maintaining the Gateways, ICM, and CTI (12-2)
 - Maintaining your messaging system (12-19)



Monitoring and maintaining the Gateways, ICM, and CTI

Overview

Purpose The purpose of this section is to provide information about the following:

- Supporting the ITG (12-3)
- Supporting the IP600 (12-5)
- Supporting the DEFINITY IP Solutions (12-6)
- Supporting the ICM server (12-7)
- Supporting the Agent Router process (12-15)



Supporting the ITG

Methods used to access the ITG

There are multiple ways to access an ITG server. These methods are listed below and described when appropriate.

Contact center and Avaya 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. Logging continues in *logfile1* greater than 10MB. 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 IP600

Refer to the *Maintenance for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Communications Server, Issue 4 (555-233-111)* document for information on supporting the IP600.



Supporting the DEFINITY IP Solutions

Refer to the *DEFINITY® Enterprise Communication Server Release 9 Administration for Network Connectivity, Issue 2 (555-233-204)*. document for information on supporting *DEFINITY* IP Solutions.



Supporting the ICM server

Access to the ICM server

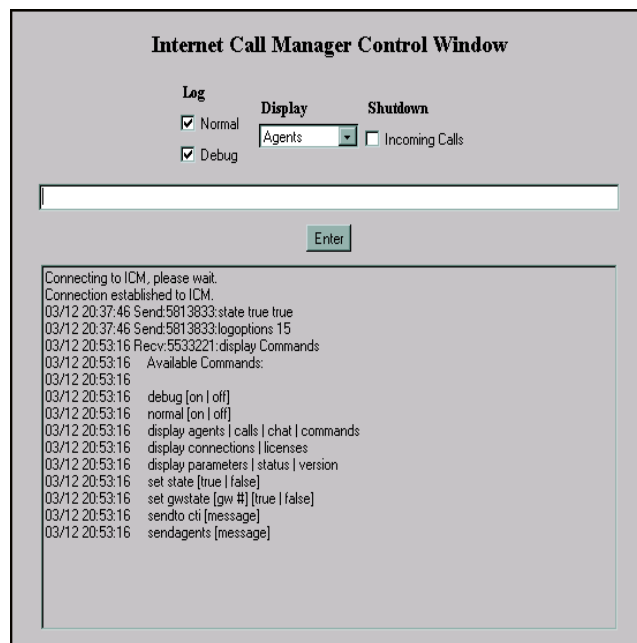
The following are access methods to the ICM server. The support capabilities differ depending on the access method.

- ICM Control Window
- Text-based controls
- Remote access through *pcANYWHERE*
- Telnet session

ICM Control Window

The Internet Call Manager Control Window is a control panel that displays the ICM log file, controls the logging level of this file, and allows an administrator to enter commands to obtain status information.

The following is an example if the ICM Control Window:



The administrator can access the ICM Control Window in several ways:

- Through the Administration Web pages
- Through the *icmUlon.sh* script (Solaris only)
- Through Start->Programs->Avaya->Internet Call Manager Software->Avaya Internet Call Manager (*Windows only*)

Text-based controls

The text-based controls provide *Windows*- and *Solaris*-based administrators with the same functionality as the ICM Control Window through a text-based interface. See *Text-based controls (4-19)* or *Solaris remote controls (4-29)* for more information.

pcANYWHERE

The *pcANYWHERE* package (and modem) allows full access to the ICM server functions and all ICM commands.

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. The ICM Utility Connection port is supported by the ICM application on the ICM server. In a manner similar to the Control Window, 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 (12-13)*). The session can be ended by normal telnet termination (press the tilde “~” followed by a period “.”) or by using the status command.

ICM server log file

Once this log file reaches 3MB, it is copied to the *icmlog.bak* file and logging continues in the *icmlog.txt* file.

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 (12-11)*) or from a remote command over the telnet (*patchmein*) session from the ITG (see *Commands on the ICM server (12-13)*). 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, customer (for Internet sessions), or call.

The log file contains all events that occur for agent login, customer access, and agent/customer interactions. The log file also contains the results of any status commands executed.

Administration log file

The administration log file contains changes made to administration. The administration log is maintained in *itg\adminlog.txt*.

Transcript log files on the ICM server

Transcripts are stored on the ICM to keep accurate records of the interactions between an agent and customer that occur during a session. The chat transcript logs are maintained in the *C:\Program Files\icm\transcripts* (default) directory.

How transcript logs are stored

The transcript log file has a maximum size of 5MB. Throughout the day, transcripts are stored to transcript log files. When the transcript log file reaches its maximum of 5MB, a new transcript log is created and subsequent session transcripts are stored in this new file.

Transcript log file names have the following format: *dd-mm-yyyy-#* (for example, *01-Jan-0000-1.txt*). The digit after the year indicates the sequence of files created in the same day. For example, *01-Jan-0000-1.txt* contains all transcripts from 15:00:00 through 17:00:00 on Jan. 1, 2000. At 17:00:00, the *01-Jan-0000-1.txt* file reached its maximum size of 5MB; therefore, a new file was created with the file name of *01-Jan-0000-2.txt*.

Import chat transcripts into a database

To manage your chat transcripts, you may want to import the chat transcript logs into a database. By importing your chat transcript logs into a database, you can analyze the data and create general reports that may help you better manage *CentreVu* Internet Solutions.

To assist in importing chat transcripts to a database, the Internet session software provides you with the ability to define either a field delimiter or a string delimiter. By default, Field Delimiter is set to “,” and String Delimiter is set to “””. You can change the field delimiter and string delimiter in the Administration Web pages. See *Administer Internet session system parameters (6-6)* for more information about the *Chat Transcript Field Delimiter* and the *Chat Transcript String Delimiter* parameters.

Change the default directory

You can change the default directory of the chat transcript log through administration. See *Administer Internet session system parameters (6-6)* for information about the *Chat Transcript Directory* parameter.

Disable chat transcript logging

You can enable or disable chat transcript logging for an arena or for the whole system. By default, chat transcript logging is enabled for the whole system. Enabling or disabling the feature by arena offers you the ability to further customize *CentreVu* Internet Solutions. For example, you may have an arena for technical support. Enabling chat transcripts may be very important for the technical support arena because you may want a record of the troubleshooting tasks that took place for future reference. Whereas, disabling another arena may be appropriate.

See *Administer arenas (6-11)* for more information about the *Enable Chat Transcript?* parameter.

Status on the ICM server

Status information available on the ICM server consists of the current agent, customer (for Internet sessions), and 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.

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.
Calls	Displays the current sessions 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 (up to 20; above 20, gives the total number). A connection ID is given for each customer and agent and may be useful for following all the events for that ID or for subsequent commands.

Menu Item	Description
Licenses	Displays the license configuration along with the total number of active calls for each license type.
Parameters	Displays the administration parameters.
Status	Displays system status.

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 Incoming Calls menu item, the ICM will not allow any type of Internet session to be processed. 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 session to be processed. For example, when an Internet session comes in from the Internet, the “outofservice” web page will appear on the customer'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 <code>sendagents</code> command. To ensure that there are no active calls prior to shutting down the ICM, use the <code>display gateways</code> command.
Gateway #x	(x equals the number for the administered gateway) To shut down an individual gateway, select the appropriate gateway from the list of gateways. When a specific gateway is shut down, all calls are then routed to the other administered gateways. If you shut down all gateways, the ICM will operate as if it has run out of voice capacities. However, Text Chat sessions will still work providing the ASAI Phantom Call feature is available. To check the status of the gateways, use the <code>display gateways</code> command. To put a gateway back in service, uncheck the appropriate gateway from the list of gateways.

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
Close <connection ID>	Clears (drops) the identified connection.
debug <on/off>	Changes the ICM logging level for more/less detail.
display calls	Displays the current calls that are known to the ICM application. Also displays the connection ID of the parties on the call.
display 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.
display licenses	Displays the license configuration along with the total number of active calls for each license type.
sendagents <text>	Broadcasts text to all active agents' control windows.
sendto cti logout <agent extension> <group extension> <agent id>	Forces the logout of the indicated agent in the contact center through the CTI process. The <group extension> is typically "none."
display agents	Displays information about the agents that are logged in to CentreVu Internet Solutions.
display counts	Displays information on the current number of calls.

Command	Description
display gateways	Displays the service state of each VoIP gateway. The service states are: • INSERTV—in service and accepting calls • OOS—out of service and safe to shut down. • FOOS—is not connected to the ICM • MANOOS—out of service, but still processing an active call.
The following commands are used for remote connections only. Do not use these commands in the ICM server text box.	
if <description> <type> <parameter>	Identifies the incoming connection over the administration and maintenance port. Use only: id mtce ext none.
patchmein	Directs ICM log file output to the administration and maintenance port and recognizes commands over this port.



Supporting the Agent Router process

Overview This section describes how to monitor and maintain the Agent Router process and also references commands and log files.

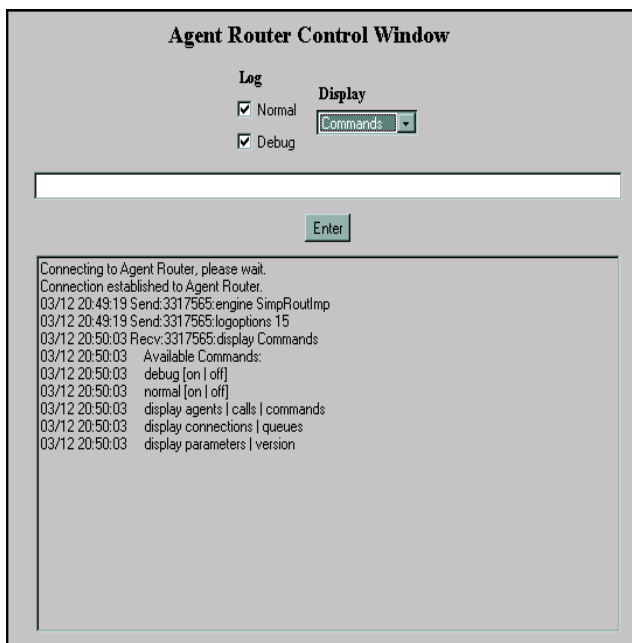
Access to Agent Router Monitoring and maintaining the Agent Router process can be conducted in the following ways:

- Through the Agent Router Control Window
- Through text-based controls

Agent Router Control Window

The Agent Router Control Window is a control panel that displays the Agent Router log file, controls the logging level of this file, and allows an administrator to enter commands to obtain status information.

The following is an example if the Agent Router Control Window:



The administrator can access the Agent Router Control Window in several ways:

- Through the Administration Web pages
- Through the *arUion.sh* script (Solaris only)
- Through Start->Programs->Avaya->Internet Call Manager Software->Avaya Agent Router (Windows only)

Text-based controls

The text-based controls provide *Windows*- and *Solaris*-based administrators with the same functionality as the Agent Router Control Window through a text-based interface. See *Text-based controls (4-19)* or *Solaris remote controls (4-29)* for more information.

Log files on the Agent Router process

The log file available for the Agent Router process is the *arlog.txt* which is maintained in the *C:\Program Files\Avaya\icm* directory (default). Once this log file reaches 2MB, it is copied to the *arlog.bak* file and logging continues in the *arlog.txt* file.

The log file contains all events that occur for agent login, customer access, and agent/customer interactions. The log file also contains the results of any status commands executed.

Information contained in the log file is useful for experienced support personnel to obtain status information and call events from the server. You can control information logging levels from the drop-down menu on the Agent Router Control Window.

Commands on the Agent Router Control Window

The following commands are intended for use by experienced support personnel to help monitor and troubleshoot the Agent Router:

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 Agent Router 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 Agent Router. Calls in Agent Router 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).
display connections	Displays the status of the ports on which the Agent Router listens for connections. Agent Router listens on a port for the ICM process and listens on another maintenance port which is used to control Agent Router when it is run as an NT service.

Command	Description
display phantomExts	Displays the list of phantom extensions the CTI process uses to launch calls. The "Message Type Phantom Extensions" are for message calls and the "Chatter Type Phantom Extensions" are used for text chat sessions.
update monitorAcds	Causes Agent Router to reload the list of "Monitored ACD Extensions" from the ctiparms.txt file.
update tserverAdmin	Causes Agent Router 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 Agent Router administration for phantom extensions or monitored ACD devices. This command drops active calls.
version	Displays the version information for Agent Router.
commands	Displays the list of valid commands.
quit	Causes Agent Router to stop.
stop	Causes Agent Router to stop.
Reset	Causes Agent Router 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 *CentreVu* Internet Solutions 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, Agent Router 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, 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.



Maintaining your messaging system

Overview

Purpose The following information explains how to manage your messaging system. The information includes recommended scheduled maintenance information.

Contents The following items are covered:

- Introduction to the Remote Maintenance Monitor (12-20)
- Introduction to the Work Flow Manager (WFM) (12-22)
- Perform a graceful shutdown (12-25)
- Recommended scheduled maintenance (12-27)
- Back up message files (12-29)
- Archive message records (12-30)
- Managing and updating the dictionary (12-35)
- Prevent overflowed messages (12-36)
- Clean up the temp directories (12-39)
- Clean up the winnt\system32\Logfiles directory (12-40)
- Check the performance characteristics of your system (12-41)
- Check NT server performance (12-42)



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 that 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 the system's inability to perform its function, the messaging software 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.

The messaging software 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 5 minutes of the Remote Maintenance Monitor restart
- When any reported error condition clears
- When Work Flow Manager and Mail Manager processes stop.

Logging errors

The messaging software will record an entry in the Remote Maintenance Monitor error log for the following conditions:

- If a destination email address or message originator is not administered
- When the messaging software processes start and stop

The Remote Maintenance Monitor retains error logs for up to 7 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
- *mmsg_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 installation directory for the messaging software. 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 messaging system.

Illustration

The following is an illustration of the Work Flow Manager Control Window:



Log files for the messaging system

The error log file where 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 error log, see Message 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.
Call	Lists all message calls to the <i>DEFINITY</i> ECS that are placed by the messaging software. This includes both message calls in the launched state and active state. The Call menu item also displays the current license values and administered limits.
Callinfo	Prints the following: • 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 Simultaneous Message Calls 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 <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 <i>Windows NT</i> services menu. This service can be restarted from the <i>Windows NT</i> services menu.
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 messaging system

To gracefully shut down the messaging system, do the following:

- 1** Use the WFM Control Window to do the following. See [Introduction to the Work Flow Manager \(WFM\) \(12-22\)](#) 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 Avaya Work Flow Manager services by doing the following:
 - From the Control Panel, select Services.
 - Click on the Avaya 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 Avaya Maintenance Monitor, and then click Stop.

6 Stop the IIS Web service.

E N D O F S T E P S



Recommended scheduled maintenance

Introduction To ensure optimum system performance, we suggest that you follow the recommended scheduled maintenance.

The following table provides the recommended scheduled maintenance:

Maintenance	Schedule
Back up message files. Perform the following two levels of backups: - After installing the messaging software, back up all message files. See Back up message files (12-29) for a list of files to back up. - Ongoing backups—message storage system and the SpellServer/dict.txt file. Use the <i>Microsoft</i> SQL server utilities to back up your message storage system.	Ongoing backups—as needed.
Archive the message database	How often you archive your message 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. Below are some figures to help you determine when to archive your MCMessages database: - 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 the messaging software is active with eight agents processing about 400 messages per hour takes approximately 8 hours. Based on the above information, the MCMessages and MCArchive databases should grow no larger than 30,000 records.
Manage and update the dictionary	As needed.

Maintenance	Schedule
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 files

Why back up message 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 files?

A backup is achieved by copying files to a specified location. You can back up your files located on your hard disk to tape through an application such as *Microsoft Windows NT Backup* found in the *Microsoft Windows Explorer*.

The following files should be backed up after you install *Message Care*:

- *msgcare.in* this file is located in the *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 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 Windows NT* desktop, and 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 messaging software's archiving process can slow performance of the system. You must also keep in mind the capacity constraints of the message database. As the capacity of the database is reaching its maximum, the messaging software will generate alarms. The messaging software generates alarms at 80%, 90%, and then 95% of the database's capacity. When the maximum capacity of the database is reached, the messaging software will stop polling for messages. More information about capacity constraints can be found in *CentreVu Internet Solutions capacities (1-7)*.

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

The messaging software provides you with two archiving methods:

- Archive from the graphical user interface (GUI). See *Perform an archive from the Archive Utility window (12-32)* 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 (12-32)* file for procedures on running archives from the command line interface.)

Archive procedures

Important! If you have a non US-English installation of the messaging software, see Non US-English installations (5-24) before running the archive.

Tests have shown that using the MCArchive tool to archive a MCMessages database containing 30,000 messages takes about 47 minutes (archiving conducted while the messaging system is stopped). The procedure to run the new archive tool is as follows:

- 1 Ensure that the target database for archiving (MCArchive) exists, and there is adequate disk space to contain the archive. (From SQL Server Enterprise Manager, right click on MCArchive under Databases to find the disk locations for MCArchive's data and transaction log files).
- 2 From SQL Server Query Analyzer, open and then execute the *MessagecareIndexes.sql* script in the SQL Tools->Install folder in the *Message Care* installed directory.
- 3 From SQL Server Query Analyzer, open and then execute the *MessagecareIndexesForArchiveIndexes.sql* script in the SQL Tools->Install folder in the *Message Care* installed directory.
- 4 From SQL Server Query Analyzer, open and then change the default database from *master* to *MCMessages*. Execute the *spMCArchive.sql* script in the SQL Tools->Install->Stored Procedures folder in the *Message Care* installed directory.
- 5 Run the Archive utility either from the command line interface (see Run an archive using the command line (12-32)) or from the Archive Utility Window (see Perform an archive from the Archive Utility window (12-32)).

END OF STEPS

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 the messaging software for this purpose.

-
- 1 From the *Windows NT* desktop, click on the Start button and select Start->Avaya Message Care->MCArchive.

Result: The Message Care Archive Utility window appears.

-
- 2 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

Post archive tasks

After an archive is completed, perform the following post-archive tasks:

-
- 1 Examine the *Windows NT* Event Log to ensure that no errors have occurred due to the MCArchive application.
 - 2 Examine the *warchive.txt* file under the *logs* folder of the messaging software's installation directory and also examine the *Windows NT* Event Log to ensure that no errors have occurred due to the MCArchive application.
 - 3 The archiving process generates many database activities which are logged in the transaction log.
Reclaim disk space on the SQL Server's transaction log for the MCMessages database by doing the following:
 1. Double-click *MCMessages* under Databases in SQL Server Enterprise Manager.
 2. Select the General tab.
 3. From the General tab, click on *truncate transaction log* located in the shaded Backup frame.
-

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 archive 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* 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 messaging software's 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 The messaging software 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 messaging 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 the messaging software helps you manage the overflowed queue

The messaging software 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 the messaging software 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

The messaging software 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 5 minutes after the messaging software 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 system restarts and resumes polling—the messaging software will resume mailbox polling only when the number of messages in the overflowed queue is below the red threshold value

The messaging software 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 (12-37)* 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 messaging 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 messaging software queues the overflowed messages internally, in a First In-First Out (FIFO) queue. Then, as resources for launching message calls become available, the messaging 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 messaging software retries overflowed calls every minute. If an overflowed call was already tried in the last minute, the messaging software skips it and all other calls to the same destination. Calls to other destinations are launched instead.

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.



Clean up the *temp* directories

How to clean up the *temp* directories

To free up disk space, periodically delete the files located in the following default directories:

- *C:\Program Files\Message Care\temp\Inbound*
- *C:\Program Files\Message Care\temp\Outbound*

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.



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 the message system, performance issues may arise depending on the number of agents and number of messages that flow through the system.

What you should check

If performance degradation is perceived, consider the following areas as likely candidates for future upgrades:

- Memory increase
- Networkload balancing software for multiple network interface cards (NICs)
- CPU upgrade



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 the chart mode. Load the data that was collected by selecting the Data From menu item from the Options menu.

The critical objects are as follows:

- Processor% Processor Time (for each processor instance): should not stay above 70% most of the time.
- SystemProcessorQueueLength: the sustained value for this should be no larger than 2. A value higher than 2 indicates a bottleneck in the system.
- MemoryPages/sec: if Pages/sec is greater than 10, then memory is constrained. Your system is seriously degrading if Pages/sec is greater than 20.
- MemoryPageFaults/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—the Paging File should typically be set to the physical memory of the NT server plus 12MB. You should also distribute it 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 CardBytesTotal/sec: a 10Mbit Ethernet segment has a maximum throughput of 1.2Mbit.



13 Troubleshooting

Overview

- Purpose** This information provides troubleshooting guidelines for *CentreVu* Internet Solutions. 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 technical support.
- Audience** This document is intended for installers, administrators, agents, and anyone who uses *CentreVu* Internet Solutions.
- Contents** The following troubleshooting categories are covered:
- Troubleshoot administration problems (13-3)
 - Troubleshoot login and logout problems (13-8)
 - Troubleshoot Internet session and message processing problems (13-17)
 - Troubleshoot Internet session and message delivery problems (13-32)
 - Troubleshoot report problems (13-46)
 - Troubleshoot system interaction problems (13-48)
 - Troubleshoot alarm and system message problems (13-62)
 - Troubleshoot installation problems (13-70)

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)*
- *Maintenance for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4 (555-233-111)*
- *Installation and Upgrade for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4 (555-233-109)*
- *DEFINITY® ECS Release 9 Administration for Network Connectivity, Issue 2 (555-233-504)*



Troubleshoot administration problems

Overview

Purpose The administration troubleshooting section provides tips for problems regarding the administration of *CentreVu* Internet Solutions.

Contents The following administration troubleshooting topics are covered:

- Cannot access administration Web pages (13-4)
- Mailbox administration changes did not take effect (13-6)
- Agents are receiving multiple simultaneous message calls (13-7)



Cannot access administration Web pages

Description An attempt to access the *CentreVu* Internet Solutions Web-based administration at *http://{icm_server_name}/icmadmin* produces an error or no Web page appears.

Action

- 1** From the *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:\Program Files\Avaya\icm\icmadmin* directory (your directory may be different depending on where the ICM software was installed) is set to */icmadmin* 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 Tomcat or JRun service is started, using Control Panel->Services.

-
- 5** Verify that the appropriate servlet engine configuration is correct:
- Verify Tomcat configuration by following the directions in Configure the Tomcat software (4-11)
 - Verify JRun configuration by doing the following:
 1. From the JRun Service Manager (Programs->JRun->JRun Administrator), select jsm-default, then Configure.
 2. From the Services tab, select jse->Service Config->Aliases. Confirm that there is an entry with the following:
Name: AdminServlet
Class Name: com.avaya.icm.admin.Admin Servlet
Init Arguments: userdir: C:\Program Files\Avaya\icm
Pre-loaded: selected
-
- 6** 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 Avaya 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.
- The messaging software uses DACs for delivering retrieved or suspended message calls to specific agents. If a message DAC is not correctly administered for the messaging software, 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) (6-50) 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 *CentreVu* Internet Solutions.

Contents The following login and logout troubleshooting topics are covered:

- Agent cannot log in (13-9)
- Agent Control Window fails to launch properly (13-13)
- The Agent or customer Control Window does not use specified language (13-15)



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. Do this using the Services dialog box (Control Panel->Services).

.....

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* 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*—this error message means that the specified agent ID or extension was 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*—this error message means that the specified agent ID was logged in to the *DEFINITY* ECS at the specified extension rather than through the Web login page.
 - *Agt_Not_Split_Member_Or_Bad_Passwd*—this error message means that an incorrect password was entered.
 - *Invalid_Skill/Split*—this error message 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 Solutions 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*—this error message means that the specified extension was entered incorrectly or that it is not administered in the *CentreVu* Computer-Telephony Security Database.
 - *INVALID_EXT*—this error message means that the specified extension is on an active session. The agent phone must be completely idle on all line appearances for the login to succeed. Placing an active session on hold will not suffice, all line appearances must be idle.

-
- 5** If a pop-up window appears stating You are already logged in at Extension xxx. What would you like to do?, perform the following:
- 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 session is in progress at the other agent station. When that session 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.
-

6

Important! Shut down any software packages running on the *CentreVu* Computer Telephony (except for Agent Router). Do not run any other applications on the server until the problem is resolved.

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.

7 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 Avaya 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 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 *Java* and JavaScript enabled:
 - From the Edit menu on *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 or the Tools menu on IE 5.0, select the Internet Options menu item, and then select Advanced. The Java JIT compiler Enabled under Java VM item should be checked. From the Security tab, select Local Intranet and then custom level.
 - Verify that none of the Java options are disabled. To do this, select the Security tab from the Internet Options dialog box. Select the Local Intranet zone in the Zone drop-down box, and then click the Custom level option.

.....
- 2** Check for error messages on the browser window. Also open the *Java* Console window and look for errors:
 - On *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 *CentreVu* Internet Solutions 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 to the system. If so, then examine the administration of the firewall and other intermediate equipment.

END OF STEPS



The Agent or customer Control Window does not use specified language

Description The Agent or customer 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 Contact 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 (13-52) problem.

Action

- 1 Verify that the language value specified in your Web page is correct. For example, to set the language to German, the form on the Web page could include:

```
<input type=hidden name="language" value="de">
```

- 2 Go to the *icm/default/resources* folder located on the ICM server. If you are using arenas, then go to *icm/{arena_name}/resources*.
-

- 3 In the *icm/default/resources* folder, verify that the resource folder and associated *phrases.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 *phrases.txt* language resource file in the *icm/default/resources/de* folder. If there is not, you must create one with the strings translated appropriately. See What is localized? (1-26) 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 Internet session and message processing problems

Overview

- Purpose** The Internet session and message processing troubleshooting section provides tips for problems that arise during the processing of Internet sessions and messages.
- Contents** The following Internet session and message processing troubleshooting topics are covered:
- Control Window closes during a session (13-18)
 - Agent gets Internet voice session but no audio connection (13-19)
 - Escorted Browsing does not work (13-21)
 - Agent hears an echo (13-22)
 - Internet voice quality is poor (13-23)
 - A Web page overwrites the real-time applet (13-24)
 - Agent cannot hear customer during an Internet voice session (13-25)
 - The New Message Display page appears but there is no message content (13-26)
 - Attachment is lost or cannot be opened (13-27)
 - New message call already active (13-29)
 - Agent cannot work on message (13-30)
 - Slow response while composing reply (13-31)



Control Window closes during a session

Description In general, if the customer Control Window closes during a session, the session is dropped. For an Internet session, this can happen, for instance, if the customer explicitly closes the window. (A telephone callback, however, stays connected.) For a message call, this can happen, for instance, if the *Message Care* server reboots.

If the Agent Control Window closes while the agent is still staffed, the current session, 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 session.

The messaging software will redeliver a message call because it was not specifically closed by an agent.



Agent gets Internet voice session 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 customer, use these suggestions to identify the problem.

Action

- 1 Check the customer Web page to verify that type=voice for the radio button used to select a voice session. See the Web Guidelines documentation for information about the type parameter.
.....
- 2 Use text chat to ask the customer if *NetMeeting* launched successfully and whether it indicates that a voice connection was made. If not, see Customer is unable to launch NetMeeting (13-37).
.....
- 3 Verify that the Telephony Application URL references a script that correctly launches the *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 (2-17) for details. If the customer's firewall is not passing UDP packets, the Callback feature may be useful.
.....
- 5 If the VoIP gateway is an ITG, verify that the ITG is booted to the "In Service" state using the *showstatus* command on the ITG console.

-
- 6** Verify that the gateway administration is correct on the ICM server. To do this, go to the Gateway Administration Web page (*http://{ICM_server_name}/icmadmin*).
-

- 7** If the gateway is an ITG, verify that the administration is correct on the ITG by running the *showdp*, *showpri*, *showptg*, and *showprp* commands. See the *Internet Telephony Gateway Technical Reference Issue 2(555027212)* document for more information.

END OF STEPS



Escorted Browsing does not work

Description The customer (or agent) attempts to send a URL using the Send Page button on his/her 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 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, Handling 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 customer.

Action

1 Determine whether the customer is using an external microphone and speakers. If so, it is likely that the echo is caused by the customer's microphone picking up sound from the speakers. Ask the customer to change the location of the microphone to minimize the echo. For the best sound quality in Internet telephony connections, customers should use a headset.

2 The echo may be coming from the customer's sound card due to a crosstalk problem.

END OF STEPS



Internet voice quality is poor

Description Internet telephony voice quality or audio delay starts out poor or becomes poor during the session.

Action

- 1** Determine whether the customer'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 customer has a *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 customer shut down other applications that may be occupying the CPU.
.....
- 3** Verify that the customer 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 to deteriorate. It can also produce long audio delays.

The agent may wish to use only text chat or to initiate a telephone callback for better voice quality.

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



A Web page overwrites the real-time applet

Description Using a *Mac* for real-time calls—if you are on a real-time call and your applet is active, it will be overwritten when you download a new Web page. The call remains active; however, text chat and collaborative browsing will not function.

Action To correct this problem, you must close the applet. Closing the applet will disconnect the call and log out of the ICM. You may also have to manually log off from the *DEFINITY* ECS.

To keep this problem from occurring, you must verify that your applet is not active when you download a Web page.



Agent cannot hear customer during an Internet voice session

Description The agent cannot hear the customer during an Internet voice session; however, the customer can hear the agent. This could be occurring due to incorrect settings for the customer's microphone.

Action

- 1** Click on the Volume icon in the Status area of your *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 Access* database, ensure that the Delivery URL 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* Outlook 98 in an RTF format, then the messaging software 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* Outlook 98 in an RTF format, then the messaging software 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* Outlook 98, the message is bundled in the MIME type *application/ms-tnef*. The messaging software 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 database.

Action **Important!** The following action will work only if your POP3 mail server, on which email is received, is *Microsoft* Exchange Server 4.5 or greater.

- 1** On the *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 the **MIME** radio button and select the option **Provide message body as plain text**.
4. Select **Use *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.

E N D O F S T E P S



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.



Slow response while composing reply

Description If your operating system is *Windows 98/95* and you log in to the messaging software using Internet Explorer, then you can potentially see a slow response time while typing text in the compose box.

This is an inherent behavior of the applet with *Windows 98/95* and Internet Explorer. However, all the text eventually appears and no information is lost.



Troubleshoot Internet session and message delivery problems

Overview

Purpose This section provides tips for problems that arise during the delivery of Internet sessions and messages.

Contents The following topics are covered:

- Agent cannot receive calls (13-33)
- No calls arrive at a new VDN (13-36)
- Customer is unable to launch NetMeeting (13-37)
- Customer is unable to connect to an agent (13-39)
- The agent is not receiving messages from a specific mailbox (13-40)
- Retrieved messages are not going to expected agent (13-42)
- The retry count is higher for specific messages going to the same VDN (13-43)
- Agent cannot retrieve message (13-44)
- Delay in message calls after the messaging software starts (13-45)



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, then 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 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 correct skill(s).

- 2** Verify that the agent is in the Auto-In or Manual-In mode on the voice terminal.

- 3** If the contact 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 *CentreVu* Internet Solutions/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 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 customer Web page has the correct URL reference with the correct VDNs and call types. See the Web Guidelines documentation for details.

For the messaging software, verify that the correct VDN is administered for the mailbox.

-
- 9** For Internet sessions, initiate a session from a browser inside the firewall. If the session connects, there may be a firewall issue. See Firewall guidelines (2-17) for further information.
-

- 10** For message calls, send a test message.

E N D O F S T E P S



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 <i>DEFINITY</i> 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 <i>CentreVu</i> Computer Telephony Security Database. See <i>CentreVu</i> Computer Telephony documentation for details. 3 Use the <code>showdp</code> command on the ITG console to verify that the new VDN has been added to the ITG dial plan. See the <i>Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)</i> document for details on how to add a VDN to the dial plan. 4 For Internet calls, examine the customer Web page to confirm that the new VDN is specified appropriately as the <code>vdn_ext</code>. 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. END OF STEPS ☐

Customer is unable to launch NetMeeting

Description A customer must have *NetMeeting* 2.0 or greater to participate in an Internet voice session with an agent. The *NetMeeting* application is launched on the customer's machine as a helper application associated with the browser.

If the customer is using Internet Explorer, then the helper application is launched automatically. If the customer is using *Netscape Navigator*, then the customer must identify the helper application to the browser the first time a Voice over IP session is launched.

Important! *NetMeeting* works only on a *Windows* PC.

Action

- 1 Identify which browser the customer is using.

- 2 Verify that the customer has installed *NetMeeting* 2.x or greater. It can be downloaded at no charge from <http://www.microsoft.com>.

- 3 If the customer's browser is *Netscape Navigator*, the customer 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 *NetMeeting* application. The default URL is *http://{icm_server_name}/servlet/WT/nmit*.

If you are still unable to launch *NetMeeting*, verify that it is associated with *Netscape* by doing the following:

1. From *Netscape*'s Preferences dialog box, select the Navigator Category if you have *Netscape* 4.x or the Helpers tab if you have *Netscape* 3.x.
2. Click *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 *NetMeeting* application.
5. Select OK.

END OF STEPS



Customer is unable to connect to an agent

Description If a customer requests a session but is not connected with an agent, this may be due to a firewall restriction on the customer side. If the customer is behind a firewall, the firewall may block the messaging needed to establish an Internet session.

Action

- 1** Verify that the contact center's firewall is not the problem by placing an Internet session from outside the firewall.
- 2** If the customer's firewall is the problem, the contact center can enable the HTTP tunneling feature. See [HTTP tunneling \(1-17\)](#). The customer can still request a telephone callback. See the [Agent cannot receive calls \(13-33\)](#) section for more suggestions.

END OF STEPS



The agent is not receiving messages from a specific mailbox

Description A specific 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 the messaging software 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 (*mmerror.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 the messaging software 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 the messaging software 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 the messaging software 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 Snapshot 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 the messaging software 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 vectors, refer to *Vectors (2-38)*

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 true only if the retrieve vector is administered as recommended in [Vectors \(2-38\)](#).

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, the messaging software 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. The messaging software attempts to launch message call A and it fails. The messaging software will not attempt to try message call B until message call A launches successfully.
4. The messaging software continues to retry to launch message call A; therefore, the retry count for message call A increases.
5. After five attempts to launch message call A, the messaging software is successful.
6. The messaging software 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, the messaging software 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 the messaging software starts

Description Upon starting the messaging software, the WFM process queries the database for all open message calls (that is, message calls in the received, active, launched, or suspended state). The messaging software 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 Solutions reports.

Contents The following report troubleshooting topics are covered:

- CMS reports abandoned message calls or calls dropped at agent (13-47)



CMS reports abandoned message calls or calls dropped at agent

Description The messaging software 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 the messaging software is dropping the call, examine the message error log (*mcerror.log*) file. The messaging software records when a call is dropped by this audit.

Important! The following parameters should only be changed with support from Avaya services personnel.

-
- 2** In the message *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 agent gets a call but no PagePop (13-49)
- Internet agent gets a session but no PagePop (13-51)
- Erroneous label on a control window button or text area (13-52)
- Agent Router cannot connect to the CentreVu™ Computer-Telephony server (13-53)
- ITG cannot connect to the ICM server (13-54)
- ICM server cannot connect to the VoIP gateway (13-55)
- Message delivery is out of order or delayed (13-57)
- Control Window does not download completely (13-58)
- The Message Care server locks up after installing the messaging software (13-59)
- pcANYWHERE™ answers but will not connect (13-60)
- Work Flow Manager unable to connect to SQL database (13-61)



Message agent gets a call but no PagePop

Description As part of the process of connecting with an incoming message call, the browser should display a PagePop. If no PagePop occurs when a call comes in, use the following steps to identify the problem.

Action

- 1** Confirm that the agent is logged 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 messaging skill(s).
-
- 2** Verify that the agent is in the Auto-In or Manual-In mode on the voice terminal.
-
- 3** If the contact 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 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 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 Chapter 6, *Administration* for details.

-
- 8** To redeliver the message call, drop the call. This will result in the messaging software redelivering the message call.

END OF STEPS



Internet agent gets a session but no PagePop

Description As part of the process of connecting with an incoming Internet session, the browser should display a PagePop (the page the customer initiated the session from, or some other page as defined by the contact center). If no PagePop occurs when a session arrives, use the following steps to identify the problem.

Action

- 1** Verify that the session is Web-based.

- 2** Confirm that the customer Web page is coded correctly. For example, if the problem is that the agent is not getting a PagePop that brings both the agent and the customer to the originating Web page, then the callUsSrcPage parameter is not coded in the customer Web page. See the Web Guidelines documentation for details.

- 3** Confirm that the Internet session administration (especially the URL administration) on the ICM is correct. See Chapter 6, Administration, for details.

END OF STEPS



Erroneous label on a control window button or text area

- Description

This label 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 `icm/default/resources` folder located on the ICM server. If you are using arena, go to the `icm/{arena_name}/resources` folder.

3

In the `icm/default/resources` folder, locate the resource file for the language that is causing the label to appear incorrectly (for example, `icm/default/resources/en-us/phrases.txt`).

4

In the `phrases.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 `phrases.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



Agent Router cannot connect to the CentreVu[®] Computer-Telephony server

- Description** The Agent Router process log (*arlog.txt*) on the *C:\Program Files\Avaya\icm* 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 customer requests are not routed to agents.
- The Agent Router periodically attempts to reconnect with the server.
- Action** Verify the *CentreVu* Computer-Telephony parameters in the Administration Web page, and verify that the ICM server is running with a valid license.



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 VoIP gateway

Description If the ICM process on the ICM server is not able to connect to the VoIP gateway, it displays the message `Connection failed, will try again in 10 seconds` in the Internet Call Manager window. customers 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 gateway is not in service. The ICM process periodically attempts to reestablish the connection.

Action

- 1** If there have been administration changes to the gateway or ICM server, then verify that the administration information is correct:
 - If the gateway is an ITG, refer to the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document.
 - If the gateway is an IP600, refer to the *Maintenance for DEFINITY® ONE Communications System Release 9 and Avaya IP600 Internet Protocol Communications Server, Issue 4 (555233111)* document.
 - Examine the “CTI Administration” Web page at `http://{icm_server_name}/icmadmin` 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.

- If applicable, in the `systemParms.txt` file, verify that the ITGPort, GW#, and GWISITG#= “yes” parameters have the correct number suffix (that is, ITGPort1, GW1, and GWISITG1= “yes” for a single ITG server environment). In a multi-ITG server environment, there must be one ITGPort, GW#, and GWISITG#= “yes parameter combination for each ITG server. For example:
 - ITGPort1, GW1, and GWISITG1= “yes” for the first ITG server
 - ITGPort2, GW2, and GWISITG2= “yes” for the second ITG server
 - ITGPort3, GW3, and GWISITG3= “yes” for the third ITG server.

2 If gateway is an ITG, and 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 the messaging software 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. The messaging software 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 the messaging software 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 calls A and B.



Control Window does not download completely

Description Users of *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 customer 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 the messaging software

- Description** The *Message Care* server can lock up if you attempt to change *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* Internet Explorer Active Desktop installed on the server.
- Action** If your server locked up due to changing an option, stop *Microsoft* Internet Explorer from the *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 *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, the messaging software displays a pop-up dialog box on the *Message Care* 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 \(5-23\)](#) 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 customers (13-63)
- Permission denied error message when using MS Internet Explorer 4.x (13-64)
- All Phantom Extensions Busy alarm (13-65)
- Connection lost message appears on the Agent Control Window (13-67)
- Agent gets “Document contains no data” message when answering a message call (13-68)
- Agent gets a “Non-Internet Agent” message (13-69)



Status message for customers

- Description** Sometimes a customer cannot connect with an agent due to various reasons within the contact center. In those cases, the customer 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 session receives a busy treatment from vector processing.
- Action** Any of these conditions prevents a customer from being connected on the type of session requested. It is advisable to incorporate additional information and options for the customer 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* 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 sessions by one to prevent the WFM from repeatedly attempting invalid connection 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 Extensions administered for the messaging software.
 - 2** Ensure that all Phantom Extensions administered on the Agent Router 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 Agent Router 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 capacity.
-
- 5 If you continue to receive the "ALL PHANTOM EXTENSIONS BUSY" alarm, restart the WFM process and Agent Router. To gracefully shut down the WFM, see Steps 14 in the section called Perform a graceful shutdown (12-25).

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 Solutions.

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 time-out parameter. If increasing the time out on the firewall is not feasible, contact the Avaya 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 an Avaya 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 logged in to *CentreVu* Internet Solutions
 - The agent is associated with an Internet VDN/skill.
- In this situation, *CentreVu* Internet Solutions could route an Internet session and the agent would get the “Non Internet Agent” message. The agent can still take the session and have a voice conversation with the customer; 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 *CentreVu* Internet Solutions.
 - 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 *CentreVu* Internet Solutions.

Contents The following installation troubleshooting topics are covered:

- Receive an ODBC error when accessing the message administration Web pages (13-71)
- Cannot start Mail Manager after installing the messaging software (13-72)
- Mail Manager locks up while trying to poll a mailbox (13-73)



Receive an ODBC error when accessing the message administration Web pages

Description You can get an ODBC error when accessing the message 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 \(5-23\)](#) for instructions on how to create an SQL server login ID and password.



Cannot start Mail Manager after installing the messaging software

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 Solutions errors and error logs.
- Audience** This information is intended for installers, administrators, agents, and anyone who uses *CentreVu* Internet Solutions.
- Contents** The following information is covered in this section:
- Message 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 Agent Router (14-15)
- For information about session transcripts, see Transcripts (1-12).



Message 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 messaging software logs errors and other events. All message error log entries record the event and time the event occurred.

The message logs include notice of communication problems between the messaging 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 messaging 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

The messaging software stores all log and error files (except the archive log) in the default-installation directory *C:\Program Files\Message Care\logfiles*.

The messaging software has the following error logs:

- Message 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 alarms

In specific situations, the messaging software will deliver alarms. The following list provides the alarms that the messaging 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

Application errors for the messaging software are logged in the *\mcerrorlog.txt* file (where the default installation directory is: *c:\Program Files\MessageCare*).

Also, most of the messaging software 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
- 1003SMTP cannot initialize
- 1004SMTP cannot initialize winsock
- 1005SMTP out of memory
- 1006Cannot resolve SMTP host name
- 1007SMTP cannot allocate socket
- 1008SMTP cannot bind socket
- 1009SMTP host not responding
- 1010Cannot send SMTP command
- 1011SMTP host timed out
- 1012Invalid SMTP handle

- 1013Invalid SMTP option
- 1014Another SMTP operation is in progress
- 1015SMTP aborted
- 2001Messages database full
- 2002Messages database 95% full
- 2003Messages database 90% full
- 2004Messages database 80% full
- 2100Unable to connect to POP3 host -- invalid host name or password
- 2101Unable to connect to POP3 host -- unknown host
- 2102POP3 server not responding
- 2200Timer expired before polling was completed
- 3000Too many attachments on message
- 3001Acknowledgment 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, the messaging software 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 messaging 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 messaging 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 message call delivery errors will repeatedly launch message calls until the error is corrected:

- No available resources to initiate message calls
- *DEFINITY* ECS returns busy condition
- *DEFINITY* ECS vector processing drops call
- Message call dropped by a message-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 messaging 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, the messaging software 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 messaging software will not try any further automatic deliveries.

The following are the known non-recoverable message call delivery errors that can result when the messaging software places the message in the failed status state:

- Message call routed off the *DEFINITY* ECS
- Message call answered and dropped by an agent not logged in to the messaging 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 9, How to process messages.

Error handling process The following steps describe the errors that can occur in the message handling process:

1 A customer sends a message to the contact center.

2 Customer messages arrive in the monitored mailboxes at the contact center.

2100Invalid Password error: If the messaging software is denied access to a mailbox due to an invalid password, an error condition will be reported immediately. The messaging software will continue to attempt to access the mailbox.

If the customer corrects the administered password in the mail system, the messaging software will gain access on the next attempt without the customer having to restart the messaging software.

-
- 3** The messaging software detects the customer's arrived message by polling an administered list of mailboxes at the specified intervals (every 5 minutes is the default).

Polling Interval error: the messaging software 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, the messaging software logs an error.

The messaging 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 messaging software copies the message into an Open Database Connectivity (ODBC) database.

-
- 5** The messaging software automatically sends an acknowledgment (if Auto Acknowledgment is administered) to the customer, 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 Auto-Acknowledgment Delivery Failure 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 messaging 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 messaging software waits to submit a message for delivery to the SMTP server. Then, if the message cannot be submitted, the messaging software informs the agent that the message submission failed and records an error in the error log.

-
- 6** The messaging 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 messaging software holds the messages in the 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 are off the *DEFINITY* ECS serviced by the *CentreVu* Computer Telephony server).

Any time a message call is routed to an invalid VDN, the messaging software will release the message call.

In this case, the messaging software has no information about the destination station, nor can it deliver a message to an agent or person on its native switch. Therefore, the messaging software releases the phantom call and attempts a call retry. After three unsuccessful retries, the messaging 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 call, the *CentreVu* CT sends a call-answered notification to the messaging software.

The following two errors may occur:

- 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 messaging software, a message call will be delivered to the agent, but no PagePop will appear.

The agent should then log in to the messaging software. The messaging 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 in to the messaging software, the history log will record the extension, and agent ID if available.

-
- 9** When the messaging software receives the call-answered notification, it delivers the message to the agent through a PagePop:

1. The messaging software supplies the agent's browser with the Uniform Resource Locator (URL) associated with the received customer'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 messaging software will process the message as if a message-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 messaging 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 customer's message, and dynamically generates a Web page.
3. If the message includes attached files, such as a fax image, the messaging 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 messaging 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 to the messaging system, or disregards the message call. This way, the customer need not rely on the agent to remember to retrieve the suspended message; the messaging software handles it automatically. See *Sample vectors for retrieve and suspend* (2-44).

-
- 10** The messaging 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 the messaging software 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 messaging 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 messaging 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 \(12-3\)](#).



Log files on the ICM server

Location of log files on the ICM server

The ICM log file (*icmlog.txt*) and the administration log file is located in the *C:\Program Files\Avaya\icm* directory.

For more information about the ICM server log file, see [Supporting the ICM server \(12-7\)](#). For information about session transcripts, see [Transcripts \(1-12\)](#).



Log file for the Agent Router

Location of Agent Router log file

The log file (*arlog.txt*) is located in the *C:\Program Files\Avaya\icm* directory.

For more information about the Agent Router log file, see [Supporting the Agent Router process \(12-15\)](#).



Appendix A: Internet Pre-Route configuration

Overview

- Purpose** The purpose of this information is to discuss the following about the Internet Pre-Route feature:
- What is the Internet Pre-Route feature? (A-2)
 - How do I install the CIRS software? (A-5)
 - How do I administer the CIRS software? (A-6)
 - How does the Internet Pre-Route feature work? (A-9)
 - How do I monitor my Internet Pre-Route environment? (A-12)
 - How can I customize interactions with the CIRS? (A-16)
- Audience** This information is intended for system administrators, supervisors, support personnel, and anyone who wants to know more about the Internet Pre-Route feature.



What is the Internet Pre-Route feature?

Important! The *Message Care* offer does not support the Internet Pre-Route feature.

Introduction The Internet Pre-Route feature enables your contact center to route *CentreVu* Internet Solutions sessions to an ICM before the sessions enter the *DEFINITY* ECS. With this capability, sessions 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 session is routed to the most available ICM for the media type. Resource routing is accomplished through a Centralized Internet Routing Service (CIRS).

Things to know about the Internet Pre-Route feature

The following list provides important information about the Internet Pre-Route feature:

- *CentreVu* Internet Solutions reporting capabilities are for single site reporting and not Internet Pre-Route reporting.
- The Internet Pre-Route feature assumes that all ICM sites are alike. This means that all ICMs must be equally capable of servicing a session 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 session 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 an Internet Pre-Route environment does not mean that you are bound to routing all your sessions through the Centralized Internet Routing Service (CIRS). You can continue to have specific sessions route to an ICM that is not connected to the CIRS.

Internet Pre-Route software

The Internet Pre-Route feature introduces new software to your *CentreVu* Internet Solutions contact center. This component is called the Centralized Internet Routing Service (CIRS) and can run on either *Windows* or *Solaris* platforms. The CIRS is responsible for routing sessions to the best ACD based on resources (session type and agent). The CIRS successfully performs resource routing by doing the following:

- Keeping track of resource information. Each session that comes into your contact center maps to a resource type (see Session 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 session and passing the VDN to the selected ICM. The ICM then launches the session 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 handle sessions.

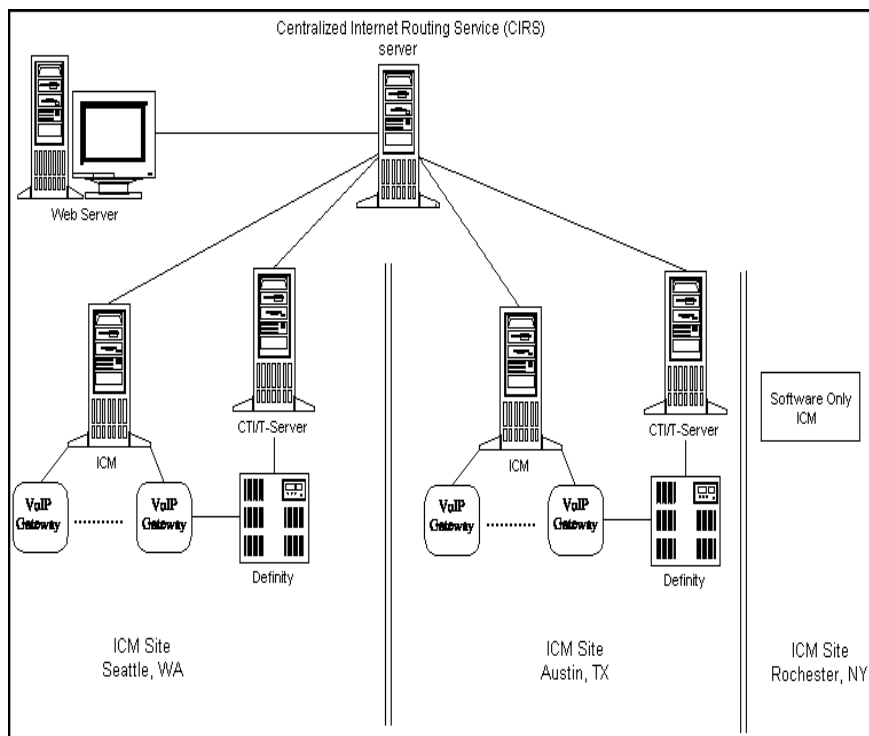
Session types and resource types

The following table provides session type and resource type mapping:

Session Type	Resource Type
Voice	Voice
Chat	Chat
Callback	Chat
Callback and Collaborate	Chat

Internet Pre-Route configuration

The following figure illustrates a high-level architecture view of the Internet Pre-Route feature:



How do I install the CIRS software?

- Windows installation** The procedure for installing the CIRS software for *Windows* is similar to that of installing the ICM or Agent Router software (see *Install the software on a Windows server* (4-3) for more information), except that you choose the CIRS and Tomcat packages.
- Solaris installation** The procedure for installing the CIRS is similar to that of installing the other *CentreVu* Internet Solutions packages (see *Install the software on a Solaris platform* (4-21) for more information).



How do I administer the CIRS software?

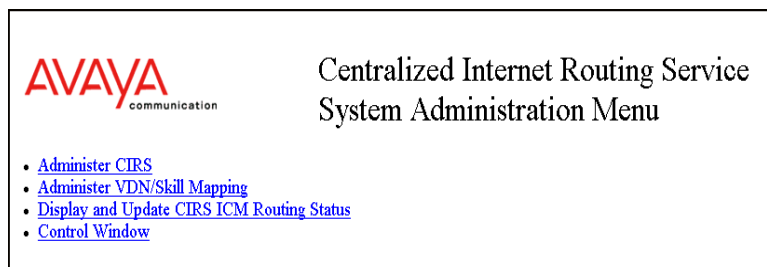
- Introduction** After you have installed the CIRS software, you must administer the following:
- Skill and VDN mapping for each ICM that is part of the Internet Pre-Route configuration
 - “No ICMs Available URL” parameter for the Web page that appears in the customer's browser when his or her session cannot be placed into the contact 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}/icmadmin/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 session request.

Illustration

An illustration of the Centralized Internet Routing Service Skill/VDN Mapping Administration Web page follows:

Centralized Internet Routing Service VDN/Skill Mapping Administration
WARNING: Administrative changes on this page take effect automatically upon clicking the "Save" button!

Help Refresh

[System Administration Menu]

Add New VDN/Skill Mapping

ICM Name	Skill	VDN

Save

Change or Review Current VDN/Skill Mapping

ICM Name	Skill	VDN

Save

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 Contact 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 CIRS

The CIRS Administration Web page contains the following fields:

- **No ICMs Available URL**—this field contains the URL of the page that is displayed to the customer when the customer's Internet session cannot be placed to the ICM because there are no available ICMs.
- **Router Class File**—this field allows you to use your own router. If you choose to replace the Avaya 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 Avaya-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-16)* for more information about customizing interactions with the CIRS and/or controlling the routing of sessions through the CIRS.

- **Is CIRS using SSL?**—this field allows you to specify whether CIRS is using Secure Socket Layer (SSL).

Illustration

An illustration of the Centralized Internet Routing Service Administration Web page follows:

Centralized Internet Routing Service Administration	
Description	Value
No ICMs Available URL	
Router Class File	
Is CIRS using SSL?	☐ yes ☒ no

Click the Save button to save the above values.

WARNING: Changes to No ICMs Available URL take effect automatically when you click on the "Save" button! Changes to the Router Class will not take effect until the CIRS service has been stopped and started.



How does the Internet Pre-Route feature work?

Introduction To describe how the Internet Pre-Route 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 customer selects the Contact Us button contains the `/servlet/CIRS` string, and the call with its associated skill parameter is passed to the CIRS.

Voice call number 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 to which voice call number 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 in to 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 Contact 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 number 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 to which voice call number 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 to 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 number one enters the CIRS (-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 customer'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:

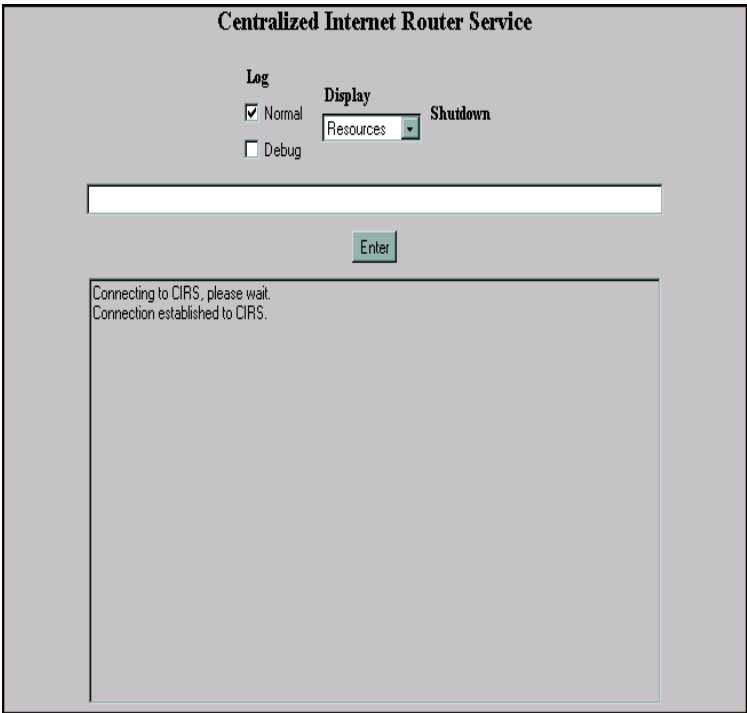
1. The CIRS still routes the session to an ICM.
2. Because there are no resources on the ICM to which the CIRS routed the session, a resource problem is presented on the ICM.



How do I monitor my Internet Pre-Route environment?

The CIRS window Use the CIRS window to monitor your Internet Pre-Route environment. To access the Centralized Internet Routing Service window, click on the Windows Start button, and then click on the Avaya 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 session.
	Agents	Lists the agents logged in to each ICM.
	Connections	Lists all the connections to the CIRS.
	Parameters	Displays all CIRS parameters.
	Version	Displays software versions.
	Commands	Displays available commands.
Shutdown	Name of ICM	Displays the ICM name for each ICM connected to the CIRS. To prevent the CIRS from routing sessions 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-13).
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`



Update ICM routing status through a Web page

How to prevent the CIRS from routing sessions to an ICM

In addition to using telnet (see Remotely shut down ICMs connected to the CIRS (A-13)), you may change a specific ICM's routing status through the Centralized Routing Services System Administration Menu Web page through the following steps:

- 1 Open the Centralized Routing Services System Administration Menu Web page by entering the following page location in your browser window:

`http://{CIRS_server_name}/icmadmin/cirs`

Result: The main CIRS Administration Menu Web page appears.

- 2 Click on the "Display and Update CIRS ICM Routing Status" link.

Result: The Update CIRS ICM routing status Web page appears.

Update CIRS ICM routing status

The table below provides the following:

- Information about each ICM's call activity within your multi-site environment
- Method to change the routing status of each ICM

ICM Server Name	Total Agents	Total Active Calls	Voice Calls		Chat Calls		Change the ICM's Routing Status	
			License Limit	Active Calls	License Limit	Active Calls	Route calls to this ICM	Do Not route calls to this ICM
No							☒	☐

IMPORTANT: You must click the Update button below to ensure that the CIRS receives your change in routing status.

Update

Refresh

- 3 To allow the CIRS to route sessions to specific ICMs, click the "Route calls to this ICM" radio button for each ICM for which you want the CIRS to route sessions.

-
- 4** To prevent the CIRS from routing sessions to specific ICMs, click the “Do Not route calls to this ICM” radio button for each ICM for which you do not want the CIRS to route sessions.
-

- 5** Click the Update button.

Result: A confirmation appears informing you that your update was successful. To see the update routing information, click the Refresh button.

END OF STEPS



How can I customize interactions with the CIRS?

Important! This information is intended for developers with a knowledge of *Java* programming. For detailed information about the following information, enter the following location in the browser window:

http://{cirs_server_name}/icm/docs

Introduction The Internet Pre-Route feature provides a Router Application Program Interface (API) that allows you to interact with the CIRS and/or control the routing of sessions through the CIRS.

The Router API provides three capabilities for interaction and control of routing sessions through the CIRS into a *CentreVu* Internet Solutions environment. These three capabilities are as follows:

- Override default route selection algorithm—this capability provides a default route selection algorithm for distributing sessions to ICM servers. You can replace this algorithm with a custom developed algorithm to make session route decisions based on your own criteria.
- Create an application that launches sessions—instead of using a Web page that interfaces directly with the CIRS through a servlet to launch *CentreVu* Internet Solutions sessions, you can develop a separate application (*Java* applet or program) that launches sessions. The application you create uses the Router API to place a session route request to the CIRS. The CIRS then identifies the ICM to use and the application uses the ICM API Specification for placing and controlling sessions to that ICM.
- Use a different centralized tool for routing sessions—the Router API provides the information obtained by CIRS for interpretation and use by a *Java* application that interfaces with another centralized tool.



Appendix B: Using another CTI application

Overview

Purpose The Internet session software 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 Avaya *CentreVu* Internet Solutions System Administration Menu, see Chapter 6, Administration.

- The preferred method for an agent to log out of the system 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 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 be required to log back in to the *CentreVu* Internet Solution only 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 the Internet skill or message 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 Internet skill or the message skill, logout events may not get sent to the *CentreVu* Internet Solution.

If you desire to have your CTI application monitor Internet skill or the message 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 *CentreVu* Internet Solution.

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 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 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 Internet 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 that Avaya Professional Services can do for you) that will ensure that the correct login information is used upon each login.

Solution	Disadvantage(s)
<i>Solution 1:</i> For each agent, create a Login Web page that contains the agent's ID, extension, and password (if required). 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.	Agent may not have the same extension each day. HTML source is easily viewable; therefore, passwords and agent IDs can be copied.
<i>Solution 2:</i> 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 in to the <i>CentreVu</i> Internet Solution, and then be deleted for password security. You can use the <i>autoform.html</i> file located in the samples directory on the ICM server as an example of a self-submitting login Web page.	The CTI application must support the generation and launching of the login Web page.
<i>Solution 3:</i> 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. Example of command line: <i>"C:\netscape" http://{icm_server_name}/servlet/WT/agentsu?agentId=1234 &agentExt=8265&agentName=Bob&agentPassword=1234...</i> For information on the parameters that must be passed to <i>http://{icm_server_name}/servlet/WT/agentsu</i>, see the Web Guidelines documentation located on your ICM 4.5 CD-ROM.	The CTI application must support the generation and launching of the login Web page.

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 Internet skill or the message 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 *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 *Java* applet will not be relinquished.



Appendix C: Handling 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 escorted browsing features.

The degree to which HTML forms sharing and the escorted browsing features work is dependent upon the following factors:

- 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, some browsers place security restrictions on the capabilities of downloaded applets and scripts. If your contact center shares Web pages with customers, then it will most likely encounter browser security restrictions.

Why do browser security restrictions affect the escorted browsing features and HTML forms sharing?

The real-time applet must be able to read the current URL from the browser window for the escorted browsing features 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.

Security for the real-time software and browser

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.avaya.com*, then the applet could access Web pages from *www.avaya.com* without any restrictions. If the applet was downloaded from *www.avaya.com* and tried to access Web pages on *cvuis.avaya.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 escorted browsing features, 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 escorted browsing features.
- Remove the Send Page button—this solution works only for escorted browsing feature on the Caller Control Window. See Removing the Send Page button (C-4) for more information.

- Embed Javascript in each Web page—this solution works for the HTML forms-sharing feature and the escorted browsing features. See *Embedding JavaScript in each Web page (C-5)* for more information.
- If the ICM software is not installed on your Web server, then link your Web server to the ICM server by using one of the *domainlinker* scripts—this solution works for the HTML forms-sharing feature and the escorted browsing features. See *Installing a domainlinker script (C-6)* for more information.



Removing the Send Page button

Removing the customer's access to the *Send Page* button is the best method if you require the use of multiple web servers and you do not want customers to use a feature that may or may not work (for example, the contact center cannot guarantee the browser used by their customers). Note that escorted browsing is always available by typing or pasting URLs in the Text Entry box field on the Agent and Caller Control Windows.

To remove the *Send Page* button from an arena, do the following:

1. From your browser, go to the main Administration Web page (http://{icm_server_name}/icmadmin) and select the *Administer CentreVu Internet Solutions* link. A framed interface appears.
2. From the left frame, click on the *Arena Parameters* link located under the arena from which you want to remove the *Send Page* button.

The *Arena Parameters* Administration Web page appears in the right frame.

3. Set the *Enable Send Site for Caller?* parameter to *No*.
4. Click the *Save* button to store your change.



Embedding JavaScript in each Web page

Embed JavaScript in each Web page

Important! Consider the following before implementing this solution:

- Consider Web pages that have frames. See the Web guidelines documentation for more information about handling web pages with frames.
- If the customer 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 Javascript 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.



Installing a domainlinker script

Overview CentreVu Internet Solutions provides the following scripts that you can use to link your ICM server and Web server(s). All scripts are located in the installation directory on the ICM server.

- *domainlinker.class* and *domainlinker\$myX509TrustManager.class* Java Servlets
- *domainlinker.pl* Perl script (does not support SSL)

We recommend that you use the *Java* Servlet version. If your Web site cannot run *Java* Servlets, then try the Perl script.

Implementing the *Java* servlet domainlinker script for PC installations

To implement the *Java* servlet script for PC installations, do the following for each Web server:

-
- 1** Locate the domainlinker scripts (*domainlinker.class* and *domainlinker\$myX509TrustManager.class*) on the ICM installation directory and install them on your Web server. You can install the scripts at any location on the Web server that you choose.
-
- 2** Create an IIS virtual directory to access the location of the domainlinker scripts.
-
- 3** Find and open the *web.xml* file according to your servlet engine:
 - If you are using Tomcat, open the *web.xml* file from the directory where Tomcat is installed (for example, *jakarta-tomcat\Webapps\root\Web-inf*).
 - If you are using JRun, open the *web.xml* file from the directory where JRun is installed (for example, *C:\Program Files\Allaire\JRun\servers\defaultapp\Web-inf*).

-
- 4 Edit the *web.xml* to include the following values:
 - `<servlet-name> domainlinker`
 - `<init-param><parm-name> ICM_isSSL`
 - `<param-value> true` (ONLY if SSL is used; otherwise set this parameter to *false*)
 - `<servlet-class> domainlinker`
 - 5 Save and close the *web.xml* file.
 - 6 Stop and then restart the servlet engine service.
 - 7 Test the domainlinker script by entering the following URL in your browser: *http://{web_server_domain_name}/servlet/domainlinker*

Result: A Web page indicating success appears.
 - 8 Inform the ICM of the new script using one of the following methods:
 - If you are linking to only one Web server domain, you can set the domainlinker parameter to the domainlinker URL through the *default/systemParms.txt* file: `domainlinker=http://{web_server_domain_name}/servlet/domainlinker`
 - If you are linking to more than one Web server domain, you must set your domainlinker parameter in the Caller Web page for each Web server domain. See the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM for more information about Caller Web pages.

END OF STEPS

Implementing the *Java* servlet domainlinker script for Solaris installations

To implement the *Java* servlet script for Solaris installations, do the following for each Web server:

1. Locate the domainlinker scripts (*domainlinker.class* and *domainlinker\$myX509TrustManager.class*) on the ICM installation directory and install them on your Web server. You can install the scripts at any location on the Web server that you choose.
2. Move the *icm.properties* on the ICM server to the directory on your Web server that defines servlets (for example, */usr/local/apache1.3.12/conf*).
3. Open the *icm.properties* file in a text editor, and do the following:
 1. Uncomment the domainlinker configuration information.
 2. Ensure that the *servlets.startup=domainlinker* line is present.
 3. Save and close the file.
4. Open the *jserv.properties* file in a text editor, and do the following:
 1. Add the following lines:
 - *zones=icm*
 - *icm.properties={servlet path}/icm.properties*
 2. In the Execution Parameters section, add the following lines:
 - *wrapper.classpath=/export/home/itg.ss/icm/vdir/jnet.jar*
 - *wrapper.classpath=/export/home/itg.ss/icm/vdir/jsse.jar*
 - *wrapper.classpath=/export/home/itg.ss/icm/vdir/jcert.jar*
 3. Save and close the file.

5 Open the *httpd.conf* file (located in the servlet directory, for example */usr/local/apache1.3.12/conf*) in a text editor and do the following:

1. Add an alias to point to the location of domainlinker (for example, `Alias /icm/ "/export/home/itg.ss/icm/vdir"`)
2. Save and then close the file.

6 Stop and then restart Apache by doing the following:

1. Log in as root.
2. Enter `{Apache directory}/bin/apachectl stop` to stop Apache.
3. Enter `{Apache directory}/bin/apachectl start` to restart Apache.

7 Test the domainlinker script by entering the following URL in your browser: *http://{web_server_domain_name}/servlet/domainlinker*

Result: A Web page indicating success appears.

8 Inform the ICM of the new script using one of the following methods:

- If you are linking to only one Web server domain, you can set the domainlinker parameter to the domainlinker URL through the *default/systemParms.txt* file: `domainlinker=http://{web_server_domain_name}/servlet/domainlinker`
- If you are linking to more than one Web server domain, you must set your domainlinker parameter in the Caller Web page for each Web server domain. See the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM for more information about Caller Web pages.

END OF STEPS

Implementing the Perl domainlinker script on PC and Solaris installations

To implement the Perl domainlinker script—which does not support SSL—do the following:

- 1 Locate the *domainlinker.pl* script in the ICM installation directory and install it in one of the following directories:
 - PC: the IIS scripts directory
 - Solaris: the cgi-bin directory of Apache
- 2 Edit the first line of *domainlinker.pl* to point to where Perl is installed on your system.
- 3 Test the domainlinker script by entering one of the following URLs in your browser:
 - PC: *http://{web_server_domain_name}/domainlinker.pl*
 - Solaris: *http://{web_server_domain_name}/cgi-bin/domainlinker.pl*

Result: A Web page indicating success appears.
- 4 Inform the ICM of the new script using one of the following methods:
 - If you are linking to only one Web server domain, you can set the domainlinker parameter to the domainlinker URL through the *default/systemParms.txt* file:
 - PC: *domainlinker=http://{web_server_domain_name}/domainlinker.pl*
 - Solaris: *domainlinker=http://{web_server_domain_name}/cgi-bin/domainlinker.pl*
 - If you are linking to more than one Web server domain, you must set your domainlinker parameter in the Caller Web page for each Web server domain. See the Web Page Guidelines documentation on the CVuIS ICC Software CD-ROM for more information about Caller Web pages.

END OF STEPS



Glossary

A ACD

Automatic Call Distributiona switch feature that distributes incoming calls to available agents.

Active Agent

A contact center employee who is processing a call.

Agent

A contact center employee who services requests from customers.

Agent Control Window

The applet that is downloaded to the agent's browser.

Agent Mailbox

A 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 IdentificationA telecommunications industry term referring to knowledge of the calling party's number.

API

Application Program Interfacea 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 InterfaceAvaya'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 Interchangea 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 Hardwarea station from which a *DEFINITY* ECS can send a call, even though there is no physical telephone.

B BCMS

Basic Call Management Systema *DEFINITY* ECS feature that provides a variety of measurements that may be used to monitor the ACD.

C Caller Control Window

The applet that is downloaded to the customer's browser when the customer initiates an Internet session.

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 real-time software that includes PagePop, escorted browsing, and HTML forms sharing. Also called Escorted Browsing.

Contact 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, turning the "call center" into a "contact center."

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 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*).

Customer

The person requesting contact with an agent.

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 Avaya associates and generally sold to contact centers.

DNIS

Dialed Number Identification Service an ACD capability that enables calls to be routed based on the number dialed by the customer.

Drill Down

To move from summary information to the detailed data that created it.

DS1

Digital Signal, level 1a 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 Selectiona *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 Associationan organization devoted to international standards for the computer manufacturing industry.

ECS

Enterprise Communications Servera *DEFINITY* switch providing features and capabilities specially designed to enhance call center operations.

Email

In the messaging-software 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 Networka *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 customer 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 the real-time software that provides a customer 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, telephone Callback, and/or by collaboratively browsing the Web.

ICM Server

A platform from which the real-time *Java* applets are served and where the *Java* call control code executes. The ICM server also proxies data between the Agent and Caller Control Windows.

IIS

Internet Information Services a *Microsoft* software package that runs on a *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 contact center and processed by the messaging software. Typically, these messages will originate from the consumer, but they may also originate from another associate within the contact 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.

IP600

Avaya IP600 Internet Protocol Communications Server one of the Voice over IP (VoIP) gateways used by *CentreVu* Internet Solutions to permit agents and customers to talk over Internet connections.

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 Compuserve).

ITG

Internet Telephony Gatewayone of the Voice over IP (VoIP) gateways used by *CentreVu* Internet Solutions to permit agents and customers to talk over Internet connections.

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 the messaging software running in a Japanese operating system for support of Japanese agents and supervisors.

L LAN

Local Area Networka 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 Supporta group of engineers within Avaya who perform pre-sale, installation, and post-sale escalated support for *CentreVu* Internet Solutions.

MAPD

Multi-Application Platforman 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 messaging software application responsible for monitoring customer-administered mailboxes for message arrival and delivery of these messages to agents. The messaging software also provides functionality for the agent to use in responding to messages. The messaging software refers to messaging (non-real time communications).

Message Administration

Contact center-defined options administered through browser-based administration Web pages.

Message-enabled agent

An agent that has successfully logged in to the messaging software. A message-enabled agent can be identified by agent ID and IP address.

Message History

The message history generated by the messaging software which tracks state status changes and events associated with each processed message.

Message Response

A message received in a POP3 mailbox, monitored by the messaging software, 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 customers or from SMEs. Customers may reply to an auto-acknowledgment or an agent-generated message. SMEs respond to inquiries sent by agents.

MIME

Multi-purpose Internet Mail Extensionsa 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 Groupa Professional Services group within Avaya composed of data engineers who provide data networking consulting services, including firewall provisioning, configuration, and maintenance.

NIC

Network Interface Card 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*-defined Open Interface for accessing most commercial databases.

Original Message

A new service request received from a customer to be processed by the contact center. Original messages may result in outbound messages being sent to both SMEs and the customer. Additionally, original messages may result in received response messages (for example, a customer 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-generated tracking number in the received message subject header.

Outbound Message

A message sent by the agent to either a customer or an SME. Replies are outbound messages providing customers 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 customer and/or agent based on session events (for example, call queued, call answered, and so on).

PBX

Private Branch eXchangea contact center 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 Interfacean ISDN standard interface which specifies B and D channels for T1 and E1 trunks.

PSTN

Public Switched Telephone Networkthe traditional medium for telephone communications.

Purchased Designer Reports

CentreVu Supervisor Designer reports that are developed by Avaya associates and generally sold to contact centers. *CentreVu* Internet Solutions 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 customer, responses received from the SME, messages sent to SMEs, or follow-up questions received from the customer. Related messages are identified by a shared tracking number stored in the message subject field.

Reply

An outbound message sent to a customer by an agent.

R-Mode

A term used to refer to the messaging software supporting the Romance languages (English, German, French, Colombian Spanish, Brazilian Portuguese, and Italian).

RONA

Redirection on No Answerif an agent does not answer the message call, RONA redirects it to other coverage.

RTDBM

Real-Time Database Managerthe real-time data manager for *CentreVu* CMS.

S Site Identifier

A numeric value (four digits) assigned by the contact center to be appended to a message's tracking number. For example, Trk # 12345678-1111 (see *Tracking Number*).

Skills Mailbox

A monitored mailbox used to collect messages which are to be serviced by any member of that skills group. The messaging software 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 Expertan associate within the contact center who is consulted by an agent for assistance in creating a customer reply.

SMTP

Simple Mail Transfer Protocolthe standard machine-to-machine (server to server) Internet electronic mail protocol. The messaging software 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 contact center's agents.

System Administrator

A contact 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 Protocola protocol that enables different computer hardware and operating systems (such as PCs, Apple computers, *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.

Tracking Number

A numeric value (up to eight digits) automatically generated by the messaging 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 messaging software uses the tracking number to handle messages. An agent can use tracking numbers to find specific messages by searching on a message's tracking number. A customer could use a tracking number to reference an email correspondence.

TSAPI

Telephony Services Application Programming Interfacea 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 Protocola TCP/IP protocol used to transmit data on data networks; commonly used to transmit Internet telephony voice packets.

URL

Uniform Resource Locatoran address used to locate information on the World Wide Web.

UUencode

A *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 Numbera 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 Announcementan identifying message sent by *DEFINITY* Generic 2 ECS to an agent about the source of an incoming session so that the agent knows how to answer the session.

Voice Terminal

Another term for a telephone.

W WAN

Wide Area Networka 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 in to a call center. Work modes include Auto-In, Manual-In, Auxiliary, and After Call Work (ACW).

WWW

World Wide Webthe body of information available on the Internet. Also referred to as “the Web.”

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