Lucent Technologies
Bell Labs Innovations

CentreVu® Call Management System

Release 3 Version 8

External Call History Interface

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- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

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- A busy tone is received
- A reorder tone is received

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Acknowledgment

This document was developed by Lucent Technologies Global Learning Solutions Organization.

CentreVu® Call Management System Release 3 Version 8

External Call History Interface

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Introduction

Overview

The External Call History Interface (ECHI) is an optional *CentreVu®* Call Management System (CMS) feature which allows you to transfer the *CentreVu* CMS Release 3 Version 8 (R3V8) call record files (call history data files) to another computer for processing.

This feature is especially useful for call centers with a high volume of calls. It allows a much higher volume of call record data to be processed and stored than can be processed and stored on the CMS computer.

NOTE:

If you are upgrading to *CentreVu* CMS R3V8, any applications associated with the ECHI may have to be rewritten because additional call record database items were added with R3V8 CMS. You need to make sure that the version field (which identifies the CMS version) is correct.

Space Allocation

You will need to allocate space on *CentreVu* CMS for call records to be buffered (in System Setup: Data Storage Allocation, up to 99,999 segments in a buffer).

Call Record File Size

As calls are processed, call records are recorded in a file (one record per call segment) until the file size reaches 20 MB or the end of an interval is reached, whichever comes first. When this happens, the file of call record segments is transferred to another computer via uucp or the designated software (at speeds of up to 38,400 bps if the computers are close) or designated software.

A new file (and its first record) is then created as the first segment of the next call is processed.

Data File Format

This document describes the format of the external call history data files and what you must do to transfer these files to your computer.

NOTE:

You are responsible for the storage of and subsequent formatting, printing, and so forth, of the data transferred to your computer.

Call Record File Format

Introduction

This section describes the format of the *CentreVu* CMS call record files that are transferred by the External Call History Interface.

Data Characteristics

Integers are stored with the least significant byte first and the most significant byte last.

Data items of type char are ASCII character strings of the length specified in the Length column of the table in "Record Field Format" on page 3 of this document. If a string is shorter than the specified amount, the unused characters are zeros. (At least one zero always follows the data in a character string.)

The following paragraphs explain how *CentreVu* CMS sends integers to the receiving computer. The receiving computer may have different descriptions for integers. Once your software has parsed and stored the data on the receiving computer, it may have been transformed to a different representation**.**

File Name Format

The call history files are named *chrxxxx* (*chr* followed by a 4-digit number) on the *CentreVu* CMS computer. The transfer process adds an extension of up to three digits so that the file name on the receiving computer is *chrxxxx.x, chrxxxx.xx or chrxxxx.xxx.*

File Header

Each call record file has the following header:

VERSION (4-byte Integer)	**SEQUENCE_NUMBER** (4-byte Integer)

The **VERSION** field identifies the R3 CMS Version and the format of the call record file. Any data, as described in this document, is correct only for R3V8 software. Therefore, the **VERSION** field will contain a 5 for every header.

The **SEQUENCE _NUMBER** field identifies a particular call record file so that duplicates can be recognized when retransmission has occurred. These files are sequential. The **SEQUENCE_NUMBER** restarts at zero when its 4-byte integer reaches its limit (when all bits are high [ones] in its binary equivalent).

Call Record Header

An example of the information contained in a call record header follows. Least significant bytes are stored first and most significant bytes are stored last.

	VERSION	SEQUENCE_NUMBER
Decimal	5	1
Binary	00000101 00000000 00000000 00000000	00000001 00000000 00000000 00000000

Record Field Format

The file header is followed by a file containing a variable number of fixed-length records whose fields appear *in the order shown* in the Field column of the following table (these items are represented by their CMS database equivalents—ECHI does not use CMS database items). This table also explains the type (integer, bit, or ASCII characters) and length of each field and the meaning of the data contained in that field. The call record fields will be populated as “null” or “0” unless the field is measured.

Field (CMS Database Equivalent)	Type	Length	Description
CALLID	integer	4 bytes	A unique number assigned to this call and all its call segments. For conferenced/transferred calls, two (or more) calls are tied together. When the entire call is recorded, one call ID is used to tie together all call segments. In “meet-me” conferences, this may result in a “later” segment of the call starting earlier than the first segment. Call IDs are not necessarily strictly sequential, but will be unique for calls over a day.

Field (CMS Database Equivalent)	Type	Length	Description
ACWTIME	integer	4 bytes	The time spent, in seconds, in After Call Work (ACW) associated with this call by the answering agent in this segment.
ANSHOLDTIME	integer	4 bytes	The total time, in seconds, the call was put on hold by the answering agent in this call segment. In agent-to-agent calls, **ANSHOLDTIME** is accrued for the answering agent if the agent puts the call on hold, but not for the other agent (who continues to accrue talk time). For Generic 2.1 switches, hold time is accrued only for Automatic Call Distribution (ACD) calls. For Generic 2.2 and Generic 3 switches, and *DEFINITY* Enterprise Communications Server (ECS) Release 5 and later, hold time is accrued for any type of call.
CONSULTTIME	integer	4 bytes	The time an agent talked on any outbound call while in AUX work, ACW, or in Other with a call on hold. This includes the time the originating agent spent talking to the destination party while establishing a conference or transferring a call. (This is the time between presses of the transfer or conference button.) It includes wait time if the agent is calling a Vector Directory Number (VDN) or split/skill extension, but the wait time can be subtracted out by subtracting the **DISPTIME** item from **CONSULTTIME**.
DISPTIME	integer	4 bytes	The wait time (in the vector, in queue, and ringing) until the disposition is recorded in **DISPOSITION** for the segment. For extension calls made directly to agents (not through a VDN), this will always be zero.
DURATION	integer	4 bytes	The total time the trunk was in use. This is the overall trunk holding time from the beginning of the call segment until the caller is disconnected. For the first segment of a call, this will be the trunk holding time for the caller for the entire call (from seized until idle). With a transfer, the original trunk remains associated with both call segments until the call ends.

Field (CMS Database Equivalent)	Type	Length	Description
SEGSTART	integer	4 bytes	*The UNIX** time and date when the call segment started. (*UNIX* time and date is the number of seconds since midnight, 01/01/70.) Call segments start when CMS receives the first message for the call, since each call segment represents a call. (When an agent transfers or conferences a call, the agent makes another call to bring about the transfer/conference.)
SEGSTOP	integer	4 bytes	*The UNIX* time and date when the call segment ended. (*UNIX* time and date is the number of seconds since midnight, 01/01/70.) A call segment ends when all trunks and agents associated with the call segment have dropped off the call. This means that after call work time for the agent(s) is included when calculating the call segment stop time.
TALKTIME	integer	4 bytes	The Total talk time for the answering agent in this segment.
NETINTIME	integer	4 bytes	The time the call spent in a VDN processing at another switch located elsewhere in the network.
ORIGHOLDTIME	integer	4 bytes	The total time the call was put on hold by the originating agent.
DISPIVECTOR	integer	2 bytes	The number of the first vector associated with the disposition VDN (DISPVDN).
DISPSPLIT	integer	2 bytes	The number of the split/skill associated with the call at its disposition in this call segment. Calls that were not queued to a split or skill at the time of disposition will have **DISPSPLIT** set to null. Calls that were queued to an unmeasured split/skill at the time of disposition will have **DISPSPLIT** set to zero.
FIRSTVECTOR	integer	2 bytes	The number of the first vector associated with the first VDN for the call segment. This will be blank if no vector is involved.
SPLIT1	integer	2 bytes	The first split/skill the call queued to in the first VDN with which it was associated in the call segment.

Field (CMS Database Equivalent)	Type	Length	Description
SPLIT2	integer	2 bytes	The second split/skill the call was also queued to in the first VDN with which it was associated in the call segment. Applies to Generic 2.2 with Expert Agent Selection (EAS), the ECS, and Generic 3 switches with vectoring only.
SPLIT3	integer	2 bytes	The third split/skill the call was also queued to in the first VDN with which it was associated in the call segment. Applies to Generic 2.2 with EAS, the ECS, and Generic 3 switches with vectoring only.
TKGRP	integer	2 bytes	The trunk group number for which data was collected (or for which an exception occurred). This will be null if the trunk group carrying the call is not measured.
EQ_LOCID	integer	2 bytes	The location ID of the trunk. This ID number is not assigned directly to a trunk, but rather the DEFINITY port network. Therefore, each trunk on the network will have the same location ID number. Valid values are ID numbers from 0 - 44.
ORIG_LOCID	integer	2 bytes	The location ID of the calling agent. This ID number is not assigned to an agent, but rather to the agent terminal and is associated with the DEFINITY port network ID. An agent may only be associated with a location ID upon login to the ACD. Valid values are ID numbers from 0 - 44.
ANS_LOCID	integer	2 bytes	The location ID of the answering agent. This ID number is not assigned to an agent, but rather to the agent terminal and is associated with the DEFINITY port network ID. An agent may only be associated with a location ID upon login to the ACD. Valid values are ID numbers from 0 - 44.
OBS_LOCID	integer	2 bytes	The location ID of the observing agent. This ID number is not assigned to an agent, but rather to the agent terminal and is associated with the DEFINITY port network ID. An agent may only be associated with a location ID upon login to the ACD. Valid values are ID numbers from 0 - 44.
ASSIST	bit	1 bit	This field indicates whether or not the answering agent in this segment requested supervisor assistance on this call. Valid values for **ASSIST** are 0=NO, 1=YES.
AUDIO	bit	1 bit	This field indicates whether or not an agent in this segment reported an audio difficulty problem. Values for **AUDIO** are 0=NO, 1=YES.

Field (CMS Database Equivalent)	Type	Length	Description
CONFERENCE	bit	1 bit	This field indicates whether or not the answering agent initiated a conference on this segment. Valid values for CONFERENCE are 0=NO, 1=YES. Available on the ECS, Generic 2.2 and Generic 3 switches.
DA_QUEUED	bit	1 bit	This field indicates whether or not the call was queued as a direct agent call Valid values for **DA_QUEUED** are 0=NO, 1=YES. Applies to the ECS and Generic 3 switches only.
HOLDABN	bit	1 bit	This field indicates whether or not this call abandoned from hold in this call segment. Valid values for **HOLDABN** are 0=NO, 1=YES. With the ECS, Generic 2.2, and Generic 3 switches, this applies to all calls the agent put on hold.
MALICIOUS	bit	1 bit	This field indicates whether or not a malicious call trace was activated for this call segment. Valid values for **MALICIOUS** are 0=NO, 1=YES. Applies to the ECS, Generic 2, and Generic 3 (except Generic 3i Version 1) switches.
OBSERVINGCALL	bit	1 bit	This field indicates whether this call represents an agent observing or bridging on to an existing call. Valid values for **OBSERVINGCALL** are 0=NO, 1=YES.
TRANSFERRED	bit	1 bit	This field indicates whether or not an answering agent initiated a transfer for this call segment. Valid values are 0=NO, 1=YES. For the ECS, Generic 2.2, and Generic 3 switches, **TRANSFERRED** includes all calls that are transferred.
AGT_RELEASED	bit	1 bit	The agent released or dropped the split/skill or direct agent ACD call. This is always true for ACD calls the agent transferred or conferenced. (0=NO, 1=YES). Available on Generic 3 and newer switches.
ACD	integer	1 byte	The ACD number for which data was collected.

Field (CMS Database Equivalent)	Type	Length	Description
DISPOSITION	integer	1 byte	This field represents the call disposition and indicates whether the call in the segment was: 1=connected (CONN, non-ACD call to a measured agent) 2=answered (ANS, split/skill or direct agent call answered by an agent) 3=abandoned (ABAN) 4=interflowed (IFLOW) 5=forced busy (FBUSY) 6=forced disconnect (FDISC) 7=other (OTHER) A connected call is a non-ACD call to a measured agent for which CMS receives an indication that the call was connected.An answered call is any split/skill or direct agent ACD call for which CMS receives an indication that the call was answered by an agent and was not a phantom abandon. An abandoned call is any ACD call in which a caller hangs up before receiving an answer from an agent and for which CMS receives notification that the caller abandoned. Phantom abandons (**PHANTOMABNS**) are included as abandoned calls. Interflowed calls are calls that are interflowed to an off-switch destination. Forced busy calls are calls that CMS records as **BUSYCALLS** for the trunk group that carried them. These calls can be VDN calls that received a forced busy from the vector command or, on the ECS and G3 switches, a split/skill call for a nonvector-controlled split that received a busy indication from the switch because the split queue was full. For Generic 2.2, Generic 3 Version 2 and newer Generic 3 switches, and the *DEFINITY* ECS, forced disconnect calls are VDN calls that are disconnected by the switch due to the execution of a disconnect vector command.

Field (CMS Database Equivalent)	Type	Length	Description
DISPOSITION (contd)	integer	1 byte	For the ECS, and Generic 3 Version 2 and later Generic 3 switches, forced disconnect calls also include calls disconnected because of the vector disconnect timer or because they reached the end of vector processing without being queued. For Generic 3 Version 1 switches, forced disconnect calls are calls that were given a forced disconnect announcement and listening to the entire announcement, then were disconnected by the switch. Other calls include any other calls that do not fall into categories such as answered or abandoned. See definitions for individual tables for **OTHERCALLS**.
DISPPRIORITY	integer	1 byte	The priority the call had at its disposition in this segment. Priorities can be 1=NO or 2=YES (without vectoring), or 3=LOW, 4=MED, 5=HIGH, or 6=TOP (with vectoring). If the call never gets queued to a split/skill, the priority will not be set. For the ECS, and Generic 3 switches with vectoring, calls directed to split/skills using “route to” or “messaging split/skill” commands and calls directly routed to splits/skills without going through a vector will have MED (no priority) or HIGH (priority) priority, depending on the class of restriction of the originator of the call (agent, extension, trunk group, or VDN).
HELD	integer	1 byte	The total number of times this call was placed on hold by the answering agent in this call segment. With agent-to-agent calls, this count is incremented for the agent who puts the call on hold, but not for the calling agent. (For the ECS, Generic 2.2, and Generic 3 switches, this applies to all calls the agent put on hold.)
SEGMENT	integer	1 byte	The number identifying the call segment. Segment numbers are from 1 up to the number of segments in the call.
ANSREASON	integer	1 byte	The reason code (0 through 9) associated with the answering agent’s mode, if the agent is in the AUX mode. For agents in AUX on switches with releases prior to the ECS or switches that do not have EAS and reason codes active, **ANSREASON** is always 0.

Field (CMS Database Equivalent)	Type	Length	Description
ORIGREASON	integer	1 byte	The reason code (0 through 9) associated with the originating agent's mode, if the agent is in the AUX mode. For agents in AUX on switches with releases prior to the ECS or switches that do not have EAS and reason codes active, **ORIGREASON** is always 0.
DISPSKLEVEL	integer	1 byte	The skill level (1 through 16) associated with the skill for which the agent answered the call or, for calls that abandoned from ringing or from a direct agent queue, with the agent from whom the call abandoned.
EVENT1-9	integer	1 byte each	The number of times each event (stroke count) button (buttons 1 to 9) was entered for this call segment. Available with the ECS, Generic 2, and Generic 3 switches.
UCID	char	21 bytes	The UCID is the Universal Call Identifier—a unique number assigned to this call segment within the customer network.
DISPVDN	char	6 bytes	The number of the VDN associated with the call at its disposition for this call segment. **DISPVDN** will be blank for calls that are not associated with a VDN at their disposition.
EQLOC	char	10 bytes	The physical equipment location (trunk number) for which data was collected or for which the exception occurred. This will be blank if the trunk is not measured. The value for this field is eight characters followed by two null characters.
FIRSTVDN	char	6 bytes	The number of the first VDN associated with the call segment. This will be blank for calls not associated with a VDN.
ORIGLOGIN	char	10 bytes	The login ID of the agent originating the call. This is used for calls an agent originates to another agent, to an on-switch extension, or to an external destination.
ANSLOGIN	char	10 bytes	The login ID of the agent who answered the call in this segment. This field is blank for unmeasured extensions when EAS is not active.
LASTOBSERVER	char	10 bytes	The login ID of the last agent who service-observed or bridged on to this call.

Field (CMS Database Equivalent)	Type	Length	Description
DIALED_NUM	char	25 bytes	The number the caller dialed (up to 24 digits). This will be the VDN for inbound vectoring calls, blank for inbound calls without vectoring, and dialed digits for outbound calls.
CALLING_PTY	char	13 bytes	The calling party identification, which is the Automatic Number Identification (ANI)/Station Identification (SID) (for Generic 2.2 or Generic 3 Version 4 switches or the ECS with Integrated Services Digital Network (ISDN) ANI delivery), extension or trunk equipment location identifying the originator of the call. This field is blank if the trunk is not measured or, for internal calls, if the originating extension is not measured. (Up to 12 digits in this field.)
LASTDIGITS	char	17 bytes	The last set of collected digits sent to the CMS by the switch for this call. These are digits the switch sends to CMS when it executes a “collect” vector command. The digits may be digits the caller was prompted to enter, either through the prompting feature on the switch or through network-prompted digits [caller-entered digits (CED)], customer database-provided digits (CDPD from the network), or digits collected through a “converse” vector command. Available on ECS switches.
LASTCWC	char	17 bytes	The last call work code (up to 16 digits) entered by the answering agent in this segment. This database item applies to Generic 2.2 and Generic 3 switches and the ECS only.
CALLING_II	char	3 bytes	The Information Indicator (II) digits associated with the call. These digits are a two-digit string provided by ISDN Primary Rate Interface (PRI) to indicate the type of originating line of the caller. These digits supply information about the originator location; for example, pay phone, hospital, or prison. The column is blank if the call does not contain II digits. Available on ECS and newer switches.

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Sample Call Scenario and Corresponding Call Records

Scenario: An inbound vectored call is answered by an ACD agent and is then transferred to a VDN. Since the call is transferred, two call records are generated (one call record is generated for every *call segment*). The first call segment is shown below. The table in this section explains the call record for the first segment.

First Call Segment and Call Record

1. A call comes into ACD 1 on TG 32 (carried on the trunk located at 0101A0102) to VDN 43211 which points to Vector 33 at 07:37:10 on 04/16/94.
2. The call queues to Split 1 at medium priority via a “queue to” command, and then queues to backup Split 2 at low priority via a “backup” command.
3. The call waits 10 seconds, then rings for 5 seconds, and then is answered by agent 5018 in Split 1.
4. The caller and agent talk for 44 seconds. The agent transfers the call to VDN 43712 which points to Vector 37. (The call is held for 4 seconds while transferring.)
5. The agent has 42 seconds of after call work during which the agent enters call work code 12345.

NOTE:

The first column in the following table shows whether the field is part of the header or a record field. See “Record Field Format” on page 3 of this document for the field type (integer, smallint or character), field length and field description. The Call Report Entry column shows data that would appear on a standard *CentreVu* CMS call report for this call segment. The shaded Call Record Entry column shows the binary equivalent of the Call Report Entry data. This binary data appears in an actual call record file *in the order shown* in the following table. Spaces are shown between bytes for clarity in the Call Record Entry column.

	Field	Call Report Entry	Call Record Entry
File Header	**VERSION**	5	00000101 00000000 00000000 00000000
.	**SEQUENCE_NUM**	1	00000001 00000000 00000000 00000000
Record Fields	**CALLID**	212	11010100 00000000 00000000 00000000
.	**ACWTIME**	00:42	00101010 00000000 00000000 00000000
.	**ANSHOLDTIME**	00:04	00000100 00000000 00000000 00000000
.	**CONSULTTIME**	00:00	00000000 00000000 00000000 00000000
.	**DISPTIME**	00:15	00001111 00000000 00000000 00000000
.	**DURATION**	04:25	00001001 00000001 00000000 00000000
.	**SEGSTART**	07:37:10 04/16/94	10110110 10111110 01010110 00100110
.	**SEGSTOP**	07:42:35 04/16/94	10110110 10111110 01011010 11101011
.	**TALKTIME**	00:44	00101100 00000000 00000000 00000000
.	**NETINTIME**	98	01100010 00000000 00000000 00000000
.	**ORIGHOLDTIME**	55	00110111 00000000 00000000 00000000
.	**DISPIVECTOR**	33	00100001 00000000
.	**DISPSPLIT**	1	00000001 00000000
.	**FIRSTIVECTOR**	33	00100001 00000000
.	**SPLIT1**	1	00000001 00000000
.	**SPLIT2**	2	00000010 00000000
.	**SPLIT3**	0	00000000 00000000
.	**TKGRP**	32	00100000 00000000
.	**EQ_LOCID**	33	00100001 00000000
.	**ORIG_LOCID**	13	00001101 00000000
.	**ANS_LOCID**	23	00010111 00000000
.	**OBS_LOCID**	42	00101010 00000000
.	**ASSIST**	N	0

	Field	Call Report Entry	Call Record Entry
.	**AUDIO**	N	0
.	**CONFERENCE**	N	0
.	**DA_QUEUED**	N	0
.	**HOLDABN**	N	0
.	**MALICIOUS**	N	0
.	**OBSERVINGCALL**	N	0
.	**TRANSFERRED**	Y	1
.	**AGT_RELEASED**	Y	1
.	**ACD**	1	00000001
.	**DISPOSITION**	Ans	00000010
.	**DISPPRIORITY**	4 (MED)	00000100
.	**HELD**	1	00000001
.	**SEGMENT**	1	00000001
.	**ANSREASON**	0	00000000
.	**ORIGREASON**	0	00000000
.	**DISPSKLEVEL**	0	00000000
.	**EVENT1-9**	0	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
.	**UCID**	00063000890 885813486	00000000 00000000 00000000 00000110 00000011 00000000 00000000 00000000 00001000 00001001 00000000 00001000 00001000 00000101 00001000 00000001 00000011 00000100 00001000 00000110 00000000
.	**DISPVDN**	43211	00110100 00110011 00110010 00110001 00110001 00000000
.	**EQLOC**	0101A01	00110000 00110001 00110000 00110001 01000001 00110000 00110001 00110000 00000000 00000000

	Field	Call Report Entry	Call Record Entry
.	**FIRSTVDN**	43211	00110100 00110011 00110010 00110001 00110001 00000000
.	**ORIGLOGIN**	0	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
.	**ANSLOGIN**	5018	00110101 00110000 00110001 00111000 00000000 00000000 00000000 00000000 00000000 00000000
.	**LASTOBSERVER**	0	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
.	**DIALED_NUM**	43211	00110100 00110011 00110010 00110001 00110001 00000000
.	**CALLING_PTY**	0101A0102 (eqloc for Generic 3 V3 and earlier) ANI for Generic 2.2, Generlc 3 V4, and the ECS	00110000 00110001 00110000 00110001 01000001 00110000 00110001 00110000 00110010 00000000 00000000 00000000 00000000
.	**LASTDIGITS**	1	00000001 00000000
.	**LASTCWC**	12345	00110001 00110010 00110011 00110100 00110101 00000000
.	**CALLING_II**	0	00000000 00000000 00000000

Second Call Segment and Call Record

The scenario continues with the second call segment of the inbound vectored call being transferred to a VDN. The call was transferred by agent 5018 to a VDN. the following table explains the call record for the second call segment. This record has no header information because it follows the first call segment record in the same file.

1. The caller is transferred to VDN 43712 which points to Vector 37.
2. The call is queued to Splits 4 and 5 at high priority using a “queue to” step to queue to Split 4, and a “check” step to queue to Split 5.
3. The call waits 1 second and then rings for 2 seconds before being answered by agent 2139 in Split 5.
4. The caller and agent talk for 3 minutes, 19 seconds, and then the agent releases the call.
5. The agent has 1 minute of after call work during which the agent enters call work code 67890. Stop time is 7:42:35 (includes the ACW time that extends beyond the time at which the caller dropped).

NOTE:

The first column in the following table shows that all fields in this record are record fields. See “Record Field Format” on page 3 of this document for the field type (integer, smallint or character), length, and description. The Call Report Entry column shows data that would appear on a standard *CentreVu* CMS call report for this call segment. The shaded Call Record Entry column shows the binary equivalent of the Call Report Entry data. This binary data appears in an actual call record file *in the order shown in the following table*. Spaces are shown between bytes for clarity in the Call Record Entry column.

	Field	Call Report Entry	Call Record Entry
Record Fields	**CALLID**	212	11010100 00000000 00000000 00000000
.	**ACWTIME**	01:00	00111100 00000000 00000000 00000000
.	**ANSHOLDTIME**	00:00	00000000 00000000 00000000 00000000
.	**CONSULTTIME**	00:00	00000000 00000000 00000000 00000000
.	**DISPTIME**	00:03	00000011 00000000 00000000 00000000
.	**DURATION**	03:22	11001010 00000000 00000000 00000000

	Field	Call Report Entry	Call Record Entry
Record Fields	**SEGSTART**	07:38:13 04/16/94	10110110 10111110 01010111 00100101
.	**SEGSTOP**	07:42:35 04/16/94	10110110 10111110 01011010 11101011
.	**TALKTIME**	03:19	11000111 00000000 00000000 00000000
.	**NETINTIME**	98	01100010 00000000 00000000 00000000
.	**ORIGHOLDTIME**	55	00110111 00000000 00000000 00000000
.	**DISPIVECTOR**	37	00100101 00000000
.	**DISPSPLIT**	5	00000101 00000000
.	**FIRSTIVECTOR**	37	00100101 00000000
.	**SPLIT1**	4	00000100 00000000
.	**SPLIT2**	5	00000101 00000000
.	**SPLIT3**	0	00000000 00000000
.	**TKGRP**	32	00100000 00000000
.	**EQ_LOCID**	33	00100001 00000000
.	**ORIG_LOCID**	23	00010111 00000000
.	**ANS_LOCID**	23	00010111 00000000
.	**OBS_LOCID**	42	00101010 00000000
.	**ASSIST**	N	0
.	**AUDIO**	N	0
.	**CONFERENCE**	N	0
.	**DA_QUEUED**	N	0
.	**HOLDABN**	N	0
.	**MALICIOUS**	N	0
.	**OBSERVINGCALL**	N	0
.	**TRANSFERRED**	N	0
.	**AGT_RELEASED**	Y	1
.	**ACD**	1	00000001
.	**DISPOSITION**	Ans	00000010

	Field	Call Report Entry	Call Record Entry
Record Fields	**DISPPRIORITY**	5 (HIGH)	00000101
.	**HELD**	0	00000000
.	**SEGMENT**	2	00000010
.	**ANSREASON**	1	00000001
.	**ORIGREASON**	9	00001001
.	**DISPSKLEVEL**	0	00000000
.	**EVENT1-9**	0	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
.	**UCID**	00063000890 885813486	00000000 00000000 00000000 00000110 00000011 00000000 00000000 00000000 00001000 00001001 00000000 00001000 00001000 00000101 00001000 00000001 00000011 00000100 00001000 00000110 00000000
.	**DISPVDN**	43712	00110100 00110011 00110111 00110001 00110010 00000000
.	**EQLOC**	0101A01	00110000 00110001 00110000 00110001 01000001 00110000 00110001 00110000 00000000 00000000
.	**FIRSTVDN**	43712	00110100 00110011 00110111 00110001 00110010 00000000
.	**ORIGLOGIN**	5018	00110101 00110000 00110001 00111000 00000000 00000000 00000000 00000000 00000000 00000000
.	**ANSLOGIN**	2139	00110010 00110001 00110011 00111001 00000000 00000000 00000000 00000000 00000000 00000000
.	**LASTOBSERVER**	0	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

	Field	Call Report Entry	Call Record Entry
Record Fields	**DIALED_NUM**	43712	00110100 00110011 00110111 00110001 00110010 00000000
.	**CALLING_PTY**	0101A0102 (eqloc for Generic 3 V3 and earlier) ANI for Generic 2.2, Generic 3 V4, and the ECS	00110000 00110001 00110000 00110001 01000001 00110000 00110001 00110000 00110010 00000000 00000000 00000000 00000000
.	**LASTDIGITS**	0	00000000 00000000
.	**LASTCWC**	67890	00110110 00110111 00111000 00111001 00110000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
.	**CALLING_II**	0	00000000 00000000 00000000

Setup Information

Introduction

This section describes External Call History Interface installation, connecting the *CentreVu* CMS computer to the receiving computer, and selecting and setting up the receiving computer.

Customer Responsibilities

You must perform the following steps to be able to transfer call history data.

- Purchase the External Call History Interface package.
- Contact the Technical Service Center (TSC) to authorize the feature. (If you are an international customer, contact your Lucent Technologies representative).
- Install the feature on *CentreVu* CMS.
- Set up the connection between the *CentreVu* CMS computer and the computer which will be receiving the data.
- Provide the receiving computer applications that will:
  - Allow the receiving computer to receive data via uucp or another file transfer utility of your choosing.
  - Parse the files of data being transferred.
  - Store the data in some usable fashion (such as in a database on the receiving computer).
  - Convert the data to a usable format.

Installing the External Call History Interface Feature

The following procedure describes installing and setting up the External Call History Interface on a *Sun*[*] server/computer.

You must install the External Call History Interface feature after it has been purchased and authorized.

NOTE:

Once the External Call History Interface feature is installed, you will no longer be able to access any call record data from *CentreVu* CMS nor will you be able to use the *CentreVu* CMS Call Record report. *CentreVu*

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

Explorer is an optional package that will allow you to view external call history data. Contact your Lucent Technologies representative for more information.

Ports

At installation, the ECHI feature will automatically select the port it will use if your *CentreVu* CMS computer is a *Sun* computer/server.

For further information on setting up ports, see “Assigning Ports on the Sun Computer” section of this manual.

Installation Procedure

To install the External Call History feature package, perform the following procedure.

1. Log in as *root*. The computer must be in run-level 2, and all file systems must be mounted.
2. Access the Services menu by entering **`cmssvc.`**

   The Services menu appears as shown below:

```
 Commands for Services Personnel

Select a command from the list below.
  1) auth_display Display feature authorizations
  2) auth_set     Authorize CMS capabilities/capacities
  3) backup       Single-tape filesystem backup (in background)
  4) run_cms      Turn CMS on or off
  5) setup        Set up the initial CMS configuration
  6) swinfo       Display switch information
  7) swsetup      Change switch information
  8) upd_install  Install update from disk files
  9) upd_remove   Back out the currently installed update
 10) upd_save     Save update on disk for later installation
Enter choice (1-10) or q to quit:
```

3. Enter **`1`** to select `auth_display,` and verify that the system is authorized to install the External Call History package.

The system responds as follows:

```
Capability/Capacity                                  Authorization
-------------------                                  ----------------
vectoring                                            authorized
forecasting                                          authorized
graphics                                             not authorized
external call history                                authorized
expert agent selection                               authorized
external application                                 authorized
Lucent Technologies CentreVu (R) Supervisor s        authorized
Lucent Technologies CentreVu (R) Report Designer s   authorized
Maximum number of agents                             1000
Maximum number of ACDs                               8
Simultaneous CentreVu (R) Supervisor logins s        50
```

NOTE:

If External Call History is not authorized but needs to be, call the Lucent Technologies National Customer Care Center at 1-800-242-2121. International customers please contact your local Lucent distributor or representative.

4. *CentreVu* CMS must be turned off before the package can be installed. To turn off *CentreVu* CMS, first access the *CentreVu* CMS Administration menu by entering **`cmsadm.`**

   The *CentreVu* CMS Administration menu appears as shown below.

```
  CentreVu(R) Call Management System Administration Menu
Select a command from the list below.
   1) acd_create  Define a new ACD
   2) acd_remove  Remove all administration and data for an ACD
   3) backup      File system backup
   4) pkg_install Install a feature package
   5) pkg_remove  Remove a feature package
   6) run_pkg     Turn a feature package on or off
   7) run_cms     Turn CentreVu (R) CMS on or off
   8) port_adm    Administer Modems, Terminals, and Printers
Enter choice (1-8) or q to quit:
```

5. Enter **7**.

   The system responds as follows:

```
Select one of the following
  1) Turn on CentreVu CMS
  2) Turn off CentreVu CMS
Enter choice (1-2)
```

6. Enter **2** to turn off *CentreVu* CMS.

   The system responds as follows:

```
*** Turning off CMS, Please wait ***
```

   CentreVu CMS turns off and the following information displays on the screen:

```
*** CMS is now off ***
```

7. Access the *CentreVu* CMS Administration menu by entering **cmsadm**.

The *CentreVu* CMS Administration menu displays.

```
  CentreVu(R) Call Management System Administration Menu
Select a command from the list below.
   1) acd_create  Define a new ACD
   2) acd_remove  Remove all administration and data for an ACD
   3) backup      Filesystem backup
   4) pkg_install Install a feature package
   5) pkg_remove  Remove a feature package
   6) run_pkg     Turn a feature package on or off
   7) run_cms     Turn CentreVu (R) CMS on or off
   8) port_adm    Administer Modems, Terminals, and Printers
Enter choice (1-9) or q to quit:
```

8. Enter **4** to select the `pkg_install` option.

   The system responds as follows:

```
The CMS Features that can be installed are
  1) forecasting
  2) external call history
Enter choice (1-2) or q to quit:
```

NOTE:

The system displays only feature packages that are authorized and not yet installed. If the External Call History package is already installed, it will not be shown.

9. Enter the number that corresponds to External Call History. (The number depends upon what has been installed.)

   The system responds as follows:

```
Enter the name of the computer to which to send call records (up
to 256 characters):
```

10. Enter the name of the receiving computer.

    The system responds as follows:

```
Enter the full path of the program to transfer call history
files (default: /cms/dc/chr/uucp_copy):
```

NOTE:

Currently, CMS uses uucp to transfer external call history files to a designated remote machine and uustat to check that the files were transferred successfully. You may optionally change these default programs to be customer-specified file transfer and check programs such as Transmission Control Protocol/Internet Protocol (TCP/IP), or the *UNIX* commands remote copy (rcp) or copy (cp) using a remote file system (RFS), by entering a different full file path instead of the default uucp/uustat interface path.

11. Enter the full path of the default file transfer utility (/cms/dc/chr/uucp_copy) or optionally enter the full path of your specific file transfer program.

    The system responds as follows:

```
Enter the full path of the program to check the external call
history file transmission (default: /cms/dc/chr/uucp_check):
```

12. Enter the full path of the default file transmission check program (/cms/dc/chr/uucp_check), or optionally enter the full path of your specific transmission checking program.

    NOTE:

    If you have chosen to enter your own file transfer and transmission checking programs, continue with step 16, entering the number of call records in the buffer.

    If you have chosen the CMS defaults, continue with the following step.

The system responds as follows:

```
Enter password for nuucp login on xxxxxxxx (up to 8
  characters):
```

13. Enter the nuucp password for the receiving computer.

    The system responds as follows:

```
Enter CMS port for connection to xxxxxxxx (s-pdexxxx):
```

14. Enter the port on the *CentreVu* CMS computer to be used by the receiving computer. (For a *Sun* computer, `s_pdevxxx` will display instead.)

    The system responds as follows:

```
Select a speed for this connection
1) 19200
2) 38400
```

15. Enter the speed that the connection between the *CentreVu* CMS and the receiving computer will be using.

    The system responds as follows:

```
Number of call segments to buffer for ACD xxxxxxx (0-99999):
```

16. Enter the number of call records to be held in the buffer if the receiving machine cannot accept the data (this should equate to a minimum of 20 MB). This step reserves disk space; therefore, sufficient disk space must be available.

NOTE:

The range (0-99999) specified in the prompt represents the total allowed over all ACDs. If you expend the entire allotment on ACD 1, you will have no more space available to other ACDs.

CAUTION:

You will lose external call record data if all the buffers on the *CentreVu* CMS computer fill up. (Standard *CentreVu* CMS call data is not affected.)

The buffers could become filled due to a link failure if the storage capacity of the receiving machine is exceeded or if the receiving machine goes down.

If you want to change the buffer size you need to change the `Number of call records` field in the `System Setup: Data Storage Allocation` window. (See Data Storage Allocation in Chapter 8, “System Setup,” in the *CentreVu® CMS Administration* document (585-210-910) for more information).

Collection of external call records resumes when uucp finishes copying the files from the *CentreVu* CMS buffers to the receiving computer.

NOTE:

Repeat Step 16 for each administered ACD.

The system responds as follows:

```
Start ECH in the on or off state: (default off)
```

17. Select whether ECH will start in the on or off state (default is off).

The system responds as follows:

```
Computing space requirements and file system
   space availability.

External Call History package installed
```

18. Verify that the installation completed successfully by entering the following:

    `tail /cms/install/logdir/admin.log`

    The External Call History package installed successfully when you see the following message:

```
   .
   .
   .
 External Call History package installed <date/time>
```

19. You can now turn *CentreVu* CMS back on. Enter **`cmsadm.`**

    The CMS Administration menu will display as follows:

```
  Call Management System Administration Menu
Select a command from the list below.
   1) acd_create  Define a new ACD
   2) acd_remove  Remove all administration and data for an ACD
   3) backup      Filesystem backup
   4) pkg_install Install a feature package
   5) pkg_remove  Remove a feature package
   6) run_pkg     Turn a feature package on or off
   7) run_cms     Turn CentreVu (R) CMS on or off
   8) port_adm    Administer, Modems, Terminals, and Printers
Enter choice (1-9) or q to quit:
```

20. Enter **7.**

    The system responds as follows:

```
Select one of the following
  1) Turn on CMS
  2) Turn off CMS
Enter choice (1-2)
```

21. Enter **1** to turn *CentreVu* CMS on.

    The system responds as follows:

```
Please wait for initialization
```

When *CentreVu* CMS comes up, the following information displays:

```
*** CMS is now up ***
```

Turn ECHI On or Off

In a CMS High Availability environment, the installed ECHI package may be turned on or off while CMS is running or not. Use the following procedure.

NOTE:

When ECHI is off, records are still being collected in files, except that the files are not sent to the receiving computer. The purpose for this is because the receiving computer can only receive files from one machine at a time

1. First access the *CentreVu* CMS Administration menu by entering **`cmsadm.`**

   The *CentreVu* CMS Administration menu appears as shown below.

```
  CentreVu(R) Call Management System Administration Menu
Select a command from the list below.
   1) acd_create  Define a new ACD
   2) acd_remove  Remove all administration and data for an ACD
   3) backup      File system backup
   4) pkg_install Install a feature package
   5) pkg_remove  Remove a feature package
   6) run_pkg     Turn a feature package on or off
   7) run_cms     Turn CentreVu (R) CMS on or off
   8) port_adm    Administer, Modems, Terminals, and Printers
Enter choice (1-8) or q to quit:
```

2. Enter **6** to run the ECHI program.

   The system responds with the following:

```
The CMS features that can be run are

     1. external call history
Enter choice (1-1) or q to quit
```

3. Enter 1 for External Call History Interface.

The system responds by listing the package status (on or off) and asking if you would like to turn it on or off:

```
ECHI is off. Do you wish to turn it on?
```

4. Enter on or off, depending on what you want to do with the package. If you turn ECHI on, the system responds as follows:

```
Do you wish to send the full call record buffer?
```

5. Enter yes or no.

CMS is Not Running and ECHI if Off

If CMS is not running and if ECHI is off, the system responds as follows:

```
External Call History is off.
    Do you wish to turn it on? (default: yes)
```

Select **Return** to turn ECHI on. The system responds as follows:

```
External Call History package turned on successfully
```

CMS is Running and ECHI is Off

If CMS is running and if ECHI is off, the system responds as follows:

```
External Call History is off.
    Do you wish to turn it on? (default: yes)
```

Select **Return** to turn ECHI on. The system responds as follows:

```
Do you wish to transmit the full buffer of call records?:
(default: yes)
```

Select **Return**. The system responds as follows:

```
External Call History package turned on successfully
```

CMS is Either Running or Not Running and ECHI is On

If CMS is either running or not running and if ECHI is on, the system responds as follows:

```
External Call History is on.
    Do you wish to turn it off? (default: yes)
```

Select **Return** to turn ECHI off. The system responds as follows:

```
External Call History package turned off successfully
```

Assigning Ports on the *Sun* Computer

If your *CentreVu* CMS computer is a *Sun* server/computer, you must install the previously described feature, and then either set the Network Terminal Server (NTS) port connections, or use a *Multiport*[*] card.

Use the Network Administrator (na) program to address and configure the NTS ports.

To set the NTS port connections, perform the following procedure.

NOTE:

You must log in as *root* at the console terminal.

1. At the system prompt, enter **na** to access the NTS administration software as shown below:

```
# na
```

   The system responds as follows:

```
command:
```

2. To associate all subsequent administration with a specific NTS, enter **annex <name of your NTS>** at the command prompt as shown below:

```
command: annex <name of your NTS>
```

*Multiport is a registered trademark of Aurora Technologies, Inc.

NOTE:

When you enter **annex <name of your NTS>**, it becomes the default NTS until another NTS is selected using the **annex** command. The default setting for the NTS ports is 9600 bps, 8 bits, no parity, and 1 stop bit.

The system responds as follows:

```
# <name of your NTS>: Annex-3-UXR7, 64 ports

command:
```

3. Perform one of the following depending upon whether you have a direct connection or a modem connection.

   a. For a direct connection, enter the following set port string command. You must include all the parameters you want to change.

```
command: set port=x-y mode slave speed <value> type hardwired
location <value> user_name <value> output_flow_control none
```

   b. For a modem connection, enter the following set port string command.

```
command: set port=x-y mode slave dedicated_address
<Sunaddress> control_lines modem_control speed <value>
type dial_in term_var dial_up broadcast_direction
network location <value> user_name <value>
output_flow_control none
```

   You must include all the parameters you want to change. The set port string command sets the parameters for the serial line ports. The “x” value is the port number on the NTS. You can specify a range of ports. The speed value must be either 19200 or 38400 bps and must match the speed of the receiving computer. You can choose your own values for `location` and `user_name` attributes, but they should be port-specific. See the following table for other values.

NOTE:

Be sure to set the **`location`** and **`user_name`** (and keep them populated) so that any problems can be traced to the correct port.

Parameter	Recommended Setting
mode	slave
dedicated_address	Set to the `ip address of the` *Sun* host. You can find this by searching (use "grep") the file */etc/host.*
control_lines	Set to **`modem_control`**.
speed	Set to match the speed of the receiving computer (**`19200`** or **`38400`** bps).
type	dial_in
term_var	dial_up
broadcast_direction	network
location	<your location>
user_name	<your user name>

NOTE:

You can break down either of these commands to make the entry easier. For example, for the direct connection, you could perform the following steps.

1. Type **`set port=x mode slave speed`** <value>.
2. Press RETURN.
3. Type **`set port=x type hardwired location`** <value>.
4. Press RETURN.
5. Continue until the entire command is entered.

4. When you are finished, use the following command to reset the ports:

```
command: reset [port number]
```

The system responds as follows:

```
resetting serial port <number> of annex <your NTS number>
```

5. To quit *na*, enter the following command:

```
command: quit
```

CAUTION:

The following procedure requires the *CentreVu* CMS computer to be rebooted. *CentreVu* CMS will be down while the system is rebooting, and you will lose *CentreVu* CMS data.
Next you must create a character special device; do so in the following manner:

a. At the console terminal, go to the */etc/rc2.d* directory.

b. Look for a *Speripherals* file. If this file does not exist, create a *Speripherals* file by using an editor such as vi.

```
# vi Speripherals
```

c. Add the following system command to the file. You must add one line per each modem or direct connection. (If the *Speripherals* file already exists, just add the command to it.)

```
rtelnet -fmrt <name of your NTS> 20 /dev/s_pdev220
```

NOTE:

The 220 in the device name indicates the second NTS and port 20 (as does the parameter 20). You can choose your own names, but the device name should reflect the terminal server and port names.

d. If you used vi to do the above editing, you can exit vi by typing **ZZ** (upper case).

6. Reboot the *CentreVu* CMS computer.

Connecting the *CentreVu* CMS Computer to the Receiving Computer

The port on the *CentreVu* CMS computer is set up for outgoing data only during feature installation. The port on the receiving computer must be set up for incoming data only.

The receiving computer must be connected to the *CentreVu* CMS computer by an RS-232 connection. This connection uses hardware flow control and runs at 19200 bps or 38400 bps.

Cabling

The computers can be connected up to a distance of 50 feet with RS-232 cabling and connectors. If the two computers cannot be located within 50 feet of each other, limited-distance modems can be used. Contact your account representative for information about modems.

NOTE:

If you are using a small NTS (8 or 16 ports), you need either a 10-pin or 8-pin straight-through connector cable. One end of the cable goes to a port on the small NTS, and the other end of the cable goes to the connector. The connector must then attach to a null modem.

Selecting and Setting Up the Receiving Computer

This section contains the receiving computer requirements. This section also explains how call records are transferred.

Consider the following points before purchasing or connecting the receiving computer:

- Processor speed should be as high as practically possible.
- The computer must have file transfer capabilities (the default is uucp, but you may choose another file transfer utility). If your receiving computer is a *UNIX* machine, refer to your *UNIX* documentation to set up uucp. If your receiving computer is a *Windows** computer, see the section "Setting Up uucp Software on a *Windows* Computer" in this document.
- If you are also using *CentreVu* Explorer, you must use uucp as the file transfer utility. Select the default settings when installing ECHI.
- The computer must be loaded with software in order to accept, store, and convert the transferred data.
- Transfer speed must be set to the same speed you choose to use on the *CentreVu* CMS computer (19200 or 38400 bps).
- Certain files (such as System and Devices) and permissions must be set up on the receiving computer. See the documentation that came with the computer for this information.
- Storage capacity should be large enough to meet your needs (based on expected call traffic and the length of time you want to store the data). A minimum of 20 MB of available space is required.

  CAUTION:

  If the disk on the receiving computer fills up, a message is sent to the *CentreVu* CMS computer and file transfer halts. This condition could cause files to back up in the *CentreVu* CMS computer buffers. If files back up, the call record data that has already been collected up to that moment will eventually be transferred to the receiving computer, but no new data will be collected. (Standard *CentreVu* CMS data is not affected.)

*Windows is a registered trademark of Microsoft, Inc.

The capacity needed to store one record in the database is 233 bytes per record. One call record is generated for each call segment.

Multiply 233 by the number of records you want to store (based on estimated call traffic and the length of time you want to store the data) to calculate approximately how much storage capacity you need.

Transferred File Names

The transfer process adds an extension of up to three digits to the call history data file name. Therefore, the file name on the receiving computer is *chrxxxx.x, chrxxxx.xx,* or *chrxxxx.xxx.*

Call Record Transfer

The transferred call history files are placed in the ~/ directory. (The ~/ directory is the default uucp directory that you can administer on the receiving computer.)

The call history files are sent from *CentreVu* CMS at the end of each interval *or* when a file reaches 20 MB in size. You must set up your receiving application to continuously check the ~/ directory for files of the *chrxxxx* format, and then copy these files to your database. The original files in ~/ should then be deleted. If files are not deleted from the ~/ directory after being copied to your database, they will eventually be overwritten.

CAUTION:

If the disk on the receiving computer fills up, a message is sent to the *CentreVu* CMS computer and file transfer halts. This condition could cause files to back up in the *CentreVu* CMS computer buffers. If files back up, the call record data that has already been collected up to that moment will eventually be transferred to the receiving computer, but no new data will be collected. (Standard *CentreVu* CMS data is not affected.)

The purpose of the sequence numbers is to be able to detect duplicate files. If you receive two files with the same sequence number, those files are duplicates. If duplicated files are received, refer to the sequence number as previously described in the "File Header" section.

Setting Up uucp Software on a *Windows* Computer

You must provide the uucp software for the receiving computer. During setup, the site names (which may be identified by other terms such as node names or host names) must match for configuration on both machines. For assistance, call the Lucent Technologies National Customer Care Center at 1-800-242-2121. International customers may contact your local Lucent distributor or representative.

NOTE:

The following steps briefly describe a typical method of setting up uucp software on a *Windows** computer. Specific details will vary from machine to machine. Refer to your uucp software documentation for more information. If the receiving computer is a *UNIX* machine, refer to your *UNIX* documentation.

1. Install the uucp software on the receiving computer by following the installation instructions for the software.
2. Configure the uucp software by following the configuration instructions for the software.
3. Reboot the computer to verify that no configuration or startup procedures conflict.
4. Define the site name for the receiving computer. This must match the name that was entered on the *CentreVu* CMS computer for the call history receiving machine during installation of the feature.
5. Define the *Spool* directory as **`C:\uucp`**.
6. Define the *Public* directory as **`C:\uucp\public`**.
7. Define the *UUXQT* path as **`C:\bin.`**
8. Define the default drive as **`C:\.`**
9. Define the receiving port as **`COM1`**.
10. Define the name of the *CentreVu* CMS computer that will be sending data. This needs to be the same as the node name of the *CentreVu* CMS computer. Type `uname -n,` and press Return on the *CentreVu* CMS at the *UNIX* prompt and run the name.

    NOTE:

    For the following step, the login ID is *nuucp*. The password is that which was created during the feature installation.

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11. Define the nuucp password that will be used by *CentreVu* CMS to log in to the receiving computer and send data. This password must match the nuucp password assigned during the External Call History Interface feature installation.

The software is now set up. Use the following section to test the setup.

Testing the Connection and Configuration

Test the connection and configuration by performing the following procedure.

1. Send e-mail from the receiving computer to the *CentreVu* CMS computer.
   a. Type `mail [cms computer name]!cms,` and press Return.
   b. Type any text. For example, `This is a test from call history receiver to cms,` and press Return.
   c. Type a `period (.),` and press Return.
2. Send e-mail from the *CentreVu* CMS computer to the receiving computer.
   a. Type `mail [receiving computer name]!user1,` and press Return.
   b. Type any text. For example, `This is a test from CMS to call history receiver,` and press Return.
   c. Type a `period (.),` and press Return.

   If both machines receive the mail, the connection is configured and operating properly.

NOTE:

The *UNIX* command `uutry <machine name>` will test the machine and provide a log of actions for tracing problems.

Reading Mail on *UNIX* Computers

To read mail on *UNIX* computers, perform the following steps.

1. Type `mail` and press Return. `to display the message.`
2. Type `?d` and press Return. `to delete the message.`
3. Type `?q` and press Return. `to quit reading mail.`

How Are We Doing?

Document Title: *CentreVu™* Call Management System Release 3 Version 8
External Call History Interface

Document No.: 585-210-912 Issue 1 Date: December 1999

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