Lucent Technologies
Bell Labs Innovations

CentreVu® Explorer

Version 1

Installation and
Getting Started Guide

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Issue 1, October 1997

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CentreVu
Explorer

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Software Installation

System Overview

CentreVu® Explorer collects data in a Lucent Technologies call center environment. Data is delivered to an external Microsoft® Windows NT® Server via a local area network (LAN) connection to the *CentreVu* Call Management System (CMS).

Note: The *CentreVu* CMS must be connected to a DEFINITY® Enterprise Communications Server (ECS)/switch. As such, *CentreVu* Explorer operates only in a Lucent Technologies environment.

Files are transmitted over the local area network approximately every 5 to 30 minutes (depending on the time of day). *CentreVu* Explorer reads these files, formats the data and stores it in a local database. This data is accessed via a query engine utilizing a web browser front end as an access vehicle.

Network Diagram

The following areas in the diagram detail the requirements:

- ECS/switch
- *CentreVu* CMS
- *CentreVu* Explorer server
- Local Area Network
- *CentreVu* Explorer client workstation.

The following diagram shows a typical network configuration utilizing *CenterVu* Explorer.

ECS/Switch   *CentreVu* Explorer CMS   *CentreVu* Explorer Server   Local Area Network

TCP/IP

CentreVu Explorer
Client Workstation
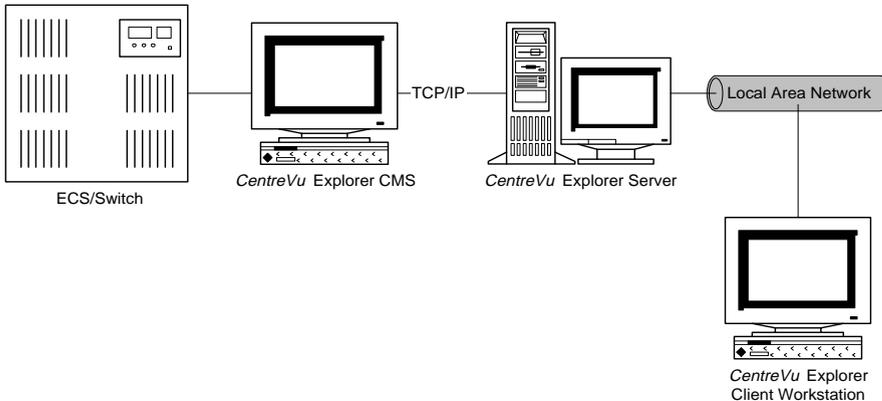
ECS/Switch Requirements

The ECS/switch requires a communication link to the *CentreVu* CMS. Appropriate automatic call distribution (ACD) translations must be configured to generate external call history (ECH) results on the *CentreVu* CMS. These results include measured agents, vectors, vector directory numbers (VDNs) and other applicable call center translations.

No exceptional connection logistics exist for the *CentreVu* Explorer product. Standard ECS/switch communication to *CentreVu* CMS is used.

CentreVu CMS Requirements

The External Call History Interface (ECHI) feature must be authorized in the *CentreVu* CMS. See setup information in the *CentreVu Call Management System Release 3 Version 4 External Call History Interface* (585-215-804) or *Version 5 External Call History Interface* (585-215-824) documents.

External Call History Interface (ECHI) Overview

The External Call History Interface is an optional *CentreVu* CMS feature, which allows for the transfer of *CentreVu* CMS Release 3 Version 4 or Version 5 call record files (call history data files) to another computer for processing.

This feature is useful for call centers with a high volume of call traffic. It allows a much higher volume of call data to be processed and stored because the *CentreVu* CMS computer can process only a limited amount of call data.

Space must be allocated on *CentreVu* CMS for call records to be buffered (in System Setup: Data Storage Allocation, up to 99,999 segments in a buffer).

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

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

Customer Responsibilities

You must do the following to transfer call history data:

1. Purchase the External Call History Interface package.

2. Contact your Lucent representative to have the ECHI feature authorized. If you are an international customer, contact your Lucent Technologies representative or distributor.

3. Install the ECHI feature on *CentreVu* CMS.

4. Set up the connection between the *CentreVu* CMS computer and the computer that will be receiving the data.

5. Setup the NT server and install the *CentreVu* Explorer software.

CentreVu Explorer Server Requirements and Recommendations

The *CentreVu* Explorer employs industry standard components to deliver access to ECS/switch CMS Call History data. As such, the final system configurations may vary in individual call centers. Recommendations for the *CentreVu* Explorer configuration follow. Hardware performance varies based on actual system configuration.

Processor

The minimum recommended processor to be used with *CentreVu* Explorer is the Intel® Pentium® Pro because of its 32-bit software architecture. Since all components of *CentreVu* Explorer are of 32-bit code, your system benefits from the Pentium architecture. Additionally, faster processor speeds improve the performance of *CentreVu* Explorer.

The minimum recommended processors for the *CentreVu* Explorer server are as follows:

- Pentium 150 Mhz or greater
- Pentium Pro, multiple processor architecture for large call centers.

Memory

CentreVu Explorer requires 128 MB of memory. Structured Query Language (SQL) server performance on large data sets is directly affected by available memory.

Call centers of all sizes benefit from *CentreVu* Explorer. Call centers taking 100,000 or more ACD calls per day quickly accumulate large volumes of data. Smaller call centers taking less than 10,000 ACD calls per day also accumulate large volumes of data over a period of months. Therefore, the following memory is recommended:

- Minimum—128 MB RAM
- Recommended—256 MB RAM
- Long term considerations—motherboard with capacity of 1 gigabyte (GB) of RAM.

Hard Disk Drives

The amount and type of local disk storage directly impacts *CentreVu* Explorer's ability to store and retrieve information. A direct correlation exists between local disk capacity and the total number of call records that can be stored. Actual disk space usage will vary by call center depending on the number of ACD calls per day, the average number of segments per call, and the number of days that *CentreVu* Explorer is required to keep data online. Please refer to Table 1, "Disk Storage," which shows disk storage requirements for a variety of daily call volumes

CentreVu Explorer operates more efficiently with Ultra Fast Wide Small Computer System Interface (SCSI) disk drives. Having the option to add Input/Output (I/O) controllers allows for performance increases as the situation dictates.

The following hard disk drives are recommended:

- Multiple 2 GB and 4 GB drives (depending on storage requirements)
- Drive type—Ultra Fast Wide SCSI
- Multiple Ultra Fast Wide SCSI smart array controllers/channels.

Remote Access

The *CentreVu* Explorer server requires a 28.8 high-speed modem and also requires that the Microsoft Remote Access Service (MRAS) be configured. Remote access is necessary for system diagnosis, maintenance, and software updates.

System Software Configuration

The following software packages are required to operate with *CentreVu* Explorer Version 1.0:

- Microsoft Windows NT Server 4.0 Service Pack 2
- Microsoft SQL Server 6.5 with Service Pack 2
- Microsoft Internet Information Server 3.0 with Active Server Pages (ASP) support.

Co-residency Issues

CentreVu Explorer is configured at installation to use all resources of the server on which Explorer is loaded.
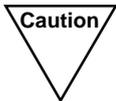
Caution   It is strongly recommended that the server remain fully dedicated to *CentreVu* Explorer. The loading and running of additional software on the *CentreVu* Explorer server is strongly discouraged because it can likely result in performance degradation to *CentreVu* Explorer users.

Disk Storage Requirements

This table shows call record storage requirements based on the number of calls per day over a period of months.

Table 1: Disk Storage

# of Months	Avg # of Segments	ACD Calls Per Day	In MegaBytes	
			Daily Req'd	**Total Req'd**
3	3	100,000	87.3	**7,853.5**
6	3	100,000	87.3	**15,707.0**
12	3	100,000	87.3	**31,414.0**
24	3	100,000	87.3	**62,828.1**
3	2	100,000	58.2	**5,235.7**
6	2	100,000	58.2	**10,471.3**
12	2	100,000	58.2	**20,942.7**
24	2	100,000	58.2	**41,885.4**
6	2	20,000	11.6	**2,094.3**
12	2	20,000	11.6	**4,188.5**
24	2	20,000	11.6	**8,377.1**
6	2	5,000	2.9	**523.6**
12	2	5,000	2.9	**1,047.1**
24	2	5,000	2.9	**2,094.3**

Example

Question: *How much disk space do I need on my server to store 3 months of call records?*

Your call center averages 100,000 calls per day with an average of 2 segments per call.

The above table shows that you would need at least 5.2 GB (5,200 MB) of disk space allocated for call records on your server.

- Daily storage requirement = 58.2 MB

- Data Total = 58.2/day x 90 days = 5,238 MB (5.2 GB)

- Disk storage for records = 5,238 MB = 5.2 GB.

Segments—All *CentreVu* Explorer information is collected on the database server in the form of call data that is divided by call segments. A segment is defined by the ECS/switch as a logical grouping of call information. Each

call that enters the ECS/switch call vector processing has a minimum of one (1) segment. Over the life of the call, information is added to a segment based on the corresponding events occurring during the call's life, starting from the time it entered vector processing and until vector processing releases all call record information for the call.

For more complete information regarding the format of ECHI data, please refer to the following External Call History Interface documents:

- *CentreVu Call Management System Release 3 Version 4 External Call History Interface* (585-215-804)

- *CentreVu Call Management System Release 3 Version 5 External Call History Interface* (585-215-824).

Optional Recommendations

We recommend the following components to enhance overall system performance and integrity:

- UPS—Uninterruptable Power Supply.
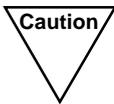
Caution An unprotected power hit may result in loss of some or all data.

- Digital tape backup—A tape backup is desirable as an archiving mechanism to minimize the requirement for on-line storage and protect valuable call center historical information.

- Near-line storage—In addition to a resident tape backup, near-line storage may be provided for direct access to archived historical information.

- Disk array controller—In the event the *CentreVu* Explorer server employs multiple hard drives, a smart array controller may be installed to allow disk mirroring, disk striping, and other storage enhancements.

Network Connectivity

CentreVu Explorer requires a transmission control protocol/internet protocol (TCP/IP) connection to the CMS via a local area network (LAN). The TCP/IP LAN connection is necessary so that the CMS can transfer external call history data to the *CentreVu* Explorer server. This same LAN connectivity allows client workstations to access *CentreVu* Explorer through a web browser.

- **ECS/switch to CMS**—Standard CMS connectivity.

- **CMS to Explorer**—Local area network connection running TCP/IP with file transfer protocol (FTP) active. The CMS must be running a software module that allows transmission of external call history files for a LAN.

- *CentreVu* **Explorer Server to Client**—Local area network connection running TCP/IP.

Client Requirements and Recommendations

The client workstation must be able to run a supported web browser. *CentreVu* Explorer has been tested with Microsoft Internet Explorer 3.01 and Netscape Navigator 3.0. However, any hypertext markup language (HTML) 2.0 compliant browser will work.

The following configuration is recommended for running *CentreVu* Explorer from a PC:

- Pentium central processing unit (CPU) or better
- 90 megahertz (MHz) or higher
- 16 MB of RAM or better
- Mouse
- Web browser (HTML 2.0 compliant)
- An Ethernet LAN card
- Windows®95 or NT workstation
- VGA monitor or better.

Note: A terminal with a resolution of 1024 X 768 video resolution or higher makes viewing data easier.

Installation Information Chart

Please complete the following table and keep for your records.

Table 2: Installation Checklist

What you need	Definition	Write It Down Here
LAN Card	The physical connection between the CMS and the Explorer server must be provided over a LAN. Two types of connections are available—Ethernet or Token Ring.	(Circle One) Ethernet Token Ring
Server computer name	*CentreVu* Explorer server computer name.	
Server domain name	*CentreVu* Explorer server domain name.	
Server IP address		
Server subnet mask		
Server default gateway		

CentreVu Explorer Installation Preparation

Please fill out the following checklist to assist Lucent Technologies in scheduling the installation of your *CentreVu* Explorer server.

CentreVu Explorer Server Hardware Checklist

Please fill in the hardware checklist below, taking care to specify additional information or descriptions where requested.

System Memory

A minimum of 128 MB is required; 256 MB is recommended.

— Please specify amount: _____

CPU Type

— Intel Pentium Processor (Please specify): _____

— Intel Single Pentium Pro 150 Mhz Processor

— Intel Single Pentium Pro 180 Mhz Processor

— Intel Single Pentium Pro 200 Mhz Processor

— Intel Dual Pentium Pro 150 Mhz Processor

— Intel Dual Pentium Pro 180 Mhz Processor

— Intel Dual Pentium Pro 200 Mhz Processor

— Other Processor (Please specify clock): _____

Disk Type

— EIDE

— SCSI (Ultra SCSI Recommended)

Disk Controller Type

— EIDE controller

— SCSI controller

— RAID (Redundant Array of Inexpensive Disks) Array Controller (Please specify RAID Level): _____

— Other (Please specify): _____

Number of I/O Controller Channels

— Please specify the number of channels: _____

Disk Capacity

A minimum of 4 GB of disk capacity is required.

— Please specify disk capacity: _____

CD-ROM

— Yes

— No

Setting Up the *CentreVu* Explorer Server

Verify that the *CentreVu* CMS can ping the *CentreVu* Explorer server. This test establishes the IP connectivity required for the *CentreVu* CMS to transfer external call history data to the *CentreVu* Explorer server.

Can you successfully ping the *CenterVu* Explorer server from the CMS?

— Yes

— No

Fill in the temporary IP address line only if you plan on enabling ECHI on *CentreVu* CMS more than 3 days prior to the scheduled installation date for the *CentreVu* Explorer server.

Note: You may need to enlist the assistance of a network administrator to accurately provide the IP address and network name resolution information.

CentreVu Explorer server modem number _____

CentreVu Explorer IP address _____-_____-_____-_____

CentreVu Explorer server system name (Choose a name with no more than 15 characters in length) _____

CentreVu Explorer login/password information _____

CentreVu CMS IP address _____-_____-_____-_____

CentreVu CMS login/password information _____

Gateway IP address _____-_____-_____-_____

DNS Server IP address _____-_____-_____-_____

Setting Up *CentreVu* Explorer Client

If you plan on accessing the *CentreVu* Explorer server from a client workstation, verify that you can reach the *CentreVu* Explorer server by pinging it from a workstation.

Can you successfully ping the *CenterVu* Explorer from a client workstation?

— Yes

— No

Setting Up *CentreVu* CMS

Lucent Technologies Professional Services will require the following information:

— *CentreVu* CMS modem number _____

Provisioning and Activation of ECHI

Call your Lucent representative to schedule activation of ECHI.

Has External Call History Interface been installed on CMS?

— Yes

— No

Note: ECHI should be activated within 24 hours prior to the installation of the *CentreVu* Explorer server software. Activation of ECHI requires a shutdown and restart of the *CentreVu C*MS. Care should be taken to schedule this appropriately.

CentreVu Explorer Server Software Installation Sequence

This section documents the software installation sequence required to install the software components for the *CentreVu* Explorer server.
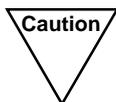
⚠ **Caution** Failure to follow the installation sequence may result in a violation of the warranty.

The following list comprises the complete set of software that is required to build a functioning *CentreVu* Explorer server from a server grade PC. It is assumed that the PC has sufficient hardware components (for example, disk, memory, and CPU). See the section entitled "*CentreVu Explorer Server Requirements and Recommendations*," in this chapter for a complete list of system requirements.

- Microsoft Windows NT Server 4.0
- Microsoft Windows NT 4.0 Service Pack 2
- Microsoft Internet Information Server 2.0
- Microsoft SQL Server 6.5
- Microsoft SQL Server 6.5 Service Pack 2
- Microsoft Internet Information Server 3.0 with ASP Support
- *CentreVu* Explorer.

Note: As an option, you may add a browser to the server.

Microsoft Windows NT 4.0 and Microsoft Internet Information Server 2.0

Microsoft Windows NT Server 4.0 is the operating system for the *CentreVu* Explorer and must be loaded before any other software components. If there is an existing version of NT on the server, it should be removed. It is preferable to format the system disk and install Windows NT Server 4.0 rather than attempt to upgrade an earlier version to 4.0. If the system already has Windows NT Server 4.0 loaded, this step can be skipped.

Microsoft Internet Information Server 2.0 must be loaded and configured as part of the Windows NT Server 4.0 setup process. *CentreVu* Explorer requires this software to be loaded.

Microsoft SQL Server 6.5

Microsoft SQL Server 6.5 is the database engine for *CentreVu* Explorer.

Microsoft SQL Server 6.5 Service Pack 2

Microsoft SQL Server 6.5 Service Pack 2 is a set of fixes and enhancements to the original release of Microsoft SQL Server 6.5. The Service Pack 2 contains relevant fixes and enhancements that are important to the integrity and performance of *CentreVu* Explorer. To download Microsoft service packs, access the Microsoft Corporation home page.

Microsoft Windows NT 4.0 Service Pack 2

Microsoft Windows NT Server 4.0 Service Pack 2 is a set of problem fixes and enhancements for Microsoft Windows NT Server 4.0. To download Microsoft service packs, access the Microsoft Corporation home page.

Microsoft Internet Information Server 3.0

The Microsoft Internet Information Server 3.0 is intended to be loaded on top of the Microsoft Internet Information Server 2.0, and it must be loaded after the Windows NT Server 4.0 installation has been completed.

Note: Microsoft Internet Information Server 3.0 is an upgrade only and must be installed after Internet Information Server 2.0. When installing Internet Information Server 3.0, you must include support for Active Server Pages (ASP). ASP support is required by *CentreVu* Explorer. To download the Internet Information Server 3.0 upgrade, access the Microsoft Corporation home page.

CentreVu Explorer

The final component to be installed is *CentreVu* Explorer software.

Note: The *CentreVu* Explorer installation process will be aborted if any of the previous software components are not loaded.

Installing on Explorer Server

The primary tasks in *CentreVu* Explorer server installation are as follows:

- Loading *CentreVu* Explorer software
- Establishing network connection.

Loading Explorer Software

Prior to loading the *CentreVu* Explorer application software, make sure you have loaded all of the required software.

Note: Have your Windows NT administrator account password and your SQL Server system administrator password available.

1. Log onto the NT Server as **Administrator.**
2. Insert the *CentreVu* Explorer CD into the respective drive. The *CentreVu* Explorer Setup program will AutoPlay.
3. If you wish to run Setup manually, click the **Start** button and then click **Run**.
4. Run the Setup program on the CD.
5. The setup wizard appears. Follow the instructions in each of the screens that follow.

Establishing Network Connection

The Appendix of this manual contains a high-level overview of connecting a server running Microsoft NT Server 4.0 to a local area network. Refer to Microsoft documentation for complete guidelines on how to connect an NT Server 4.0 machine to your local area network.

Installing on Desktop Client

Installing the desktop administration vehicle for the *CentreVu* Explorer requires any industry standard web browser. Compatible web browsers include the following:

- Microsoft Internet Explorer 3.0 with ASP support.
- Netscape Navigator 3.0.

Launching *CentreVu* Explorer

After installing the appropriate browser, click on the internet browser icon on your desktop.

After clicking the internet browser icon, your predefined "home page" is activated. If the *CentreVu* Explorer screen is not defined as your start-up screen, you must change the IP address to your *CentreVu* Explorer server.

After entering the correct IP address or host name, the *CentreVu* Explorer home page will appear as shown below:
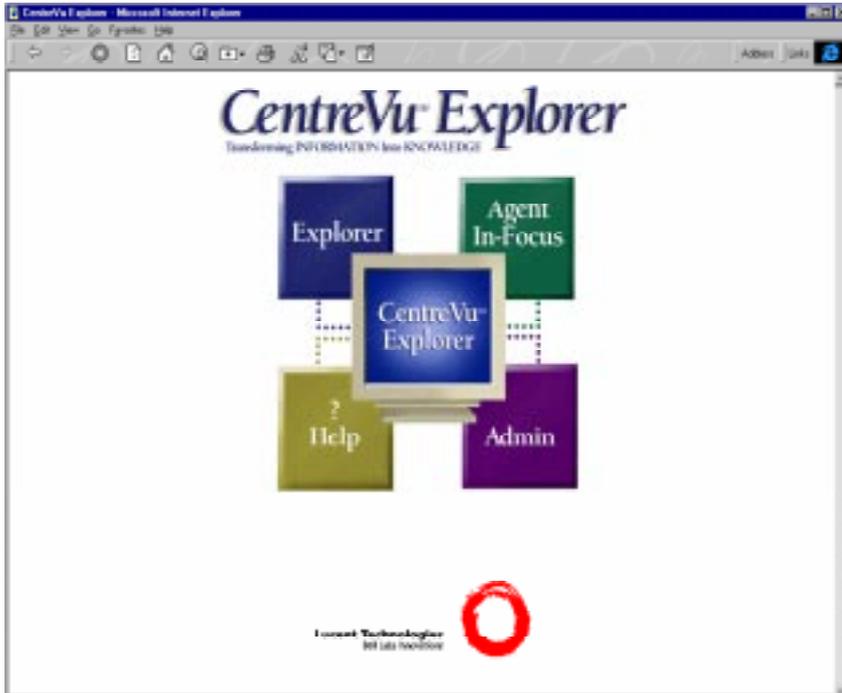
You are now ready to use *CentreVu* Explorer.

Verifying the Installation

When the installation of *CentreVu* Explorer is completed, the following procedure can be used to determine if data is flowing from the *CentreVu* CMS:

1. Log into the *CentreVu* Explorer server.

2. From the Start Menu choose **Settings**.

3. Click on **Control Panel.** You should see a window similar to the one shown below:

4. From the Control Panel double click on the *CentreVu* icon.

You should then see the *CentreVu* Data Import Service Control applet as shown below:
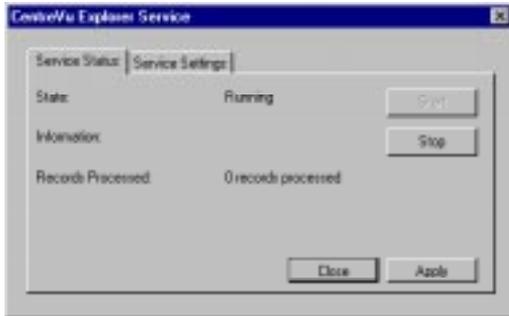
Verify that the *CentreVu* Explorer Service is running. If the status is stopped, click on the **Start** button to start the service. If there are External Call History records available and the *CentreVu* CMS is sending data properly, the records processed field should increment within 45 minutes of the installation completion time.

Once the Records Processed field has incremented from zero, records in the database can be viewed from the *CentreVu* Explorer browser.

Failure to see the Records Processed field increment from zero indicates that one of the following situations is occurring:

- There is little or no ACD activity occurring in the ECS/switch.
- External Call History Interface has not been activated in the *CentreVu* CMS.
- The *CentreVu* CMS External Call History Interface data transfer routines have not been configured properly.
- The External Call History Interface data transfer interval in the *CentreVu* CMS is set to an interval greater than 30 minutes.
- The *CentreVu* CMS is unable to connect via IP to the *CentreVu* Explorer server.
- The *CentreVu* Explorer server has not been installed properly.
- The SQL server database is not functioning.

The last two items in the list above can be checked by looking in the NT Event Log for any errors pertaining to the SQL Server or the *CentreVu* Explorer Service. If there are no error messages indicating a failure, record the message and contact the National Customer Care Center at 1-800-242-2121. (Lucent Technologies also offers fee-based installation consultation.) Customers outside the United States should contact their Lucent representative or distributor.

CentreVu Explorer Database Backup

CentreVu Explorer stores ECHI data from the *CentreVu* CMS in a Microsoft SQL Server database. We recommend the database be periodically archived to allow for data recovery in the event of a catastrophic system failure. The backup interval should be determined based on acceptable data loss. Nightly or daily off-peak backups are suggested.

Data backup is performed using standard Windows NT and SQL Server tools. Contact your Windows NT and SQL Server administrators to assist you in setting up a data backup plan for *CentreVu* Explorer.

Preventing data loss up front is the best method for assuring the integrity and accuracy of your data. Setting up the *CentreVu* Explorer server with a fault-tolerant disk configuration is the best way to prevent data loss. See Windows NT Help for more information about how disk mirroring, disk stripe sets, and redundant array of inexpensive disks (RAID) configurations can help you achieve fault tolerance and performance for your *CentreVu* Explorer server.

Getting Started with Explorer

Product Overview

CentreVu® Explorer transforms valuable *DEFINITY*® Call Center information into powerful knowledge. This knowledge is crucial to the management of your call center.

By applying information collected from the Lucent Technologies *CentreVu* Call Management System (CMS), *CentreVu* Explorer provides a graphical user interface enabling desktop queries, reports and cradle-to-grave analysis of a call center's performance. *CentreVu* Explorer provides a powerful mechanism to store and retrieve valuable call center data over any period of time. Additionally, call centers have access to this detailed information well into the future.

The *CentreVu* Explorer provides insight into many areas of call center management, including the following:

- Cradle-to-grave per call reporting
- Agent activities such as talk time and call work codes
- Vector directory number (VDN) and split/skill information
- Call transfers from split/skill, voice response units and switches

- Special call treatment such as Service Observing and Malicious Call Trace

- Queue treatment such as holding times and abandons in queue.

CentreVu Explorer delivers knowledge to the desktop via powerful Microsoft® Windows NT® based internet server technologies. *CentreVu* Explorer requires only a frame compliant web browser on the client. This architecture provides access to critical call center data from any desktop PC or workstation running a web-enabled operating system, such as Windows®, OS/2®, UNIX®, or MacIntosh®. Employing this technology uses minimal desktop PC resources. This architecture also allows an organization full access to *CentreVu* Explorer from multiple web-enabled operating systems.

The hardware architecture of *CentreVu* Explorer is expandable to meet storage requirements. It combines a local storage system with external archived capabilities to provide rapid query access while collecting historical information over long periods of time. The customer selects system storage capacities and data retrieval rates to meet the individual call center requirements.

CentreVu Explorer provides a very intuitive navigation method to query a library of elements and "drill down" to further call details. Starting at a high level, you can select one of several call center elements and step through additional layers until you reach the information you desire.

Main Menu

The *CentreVu* Explorer main window displays four icons as shown below:
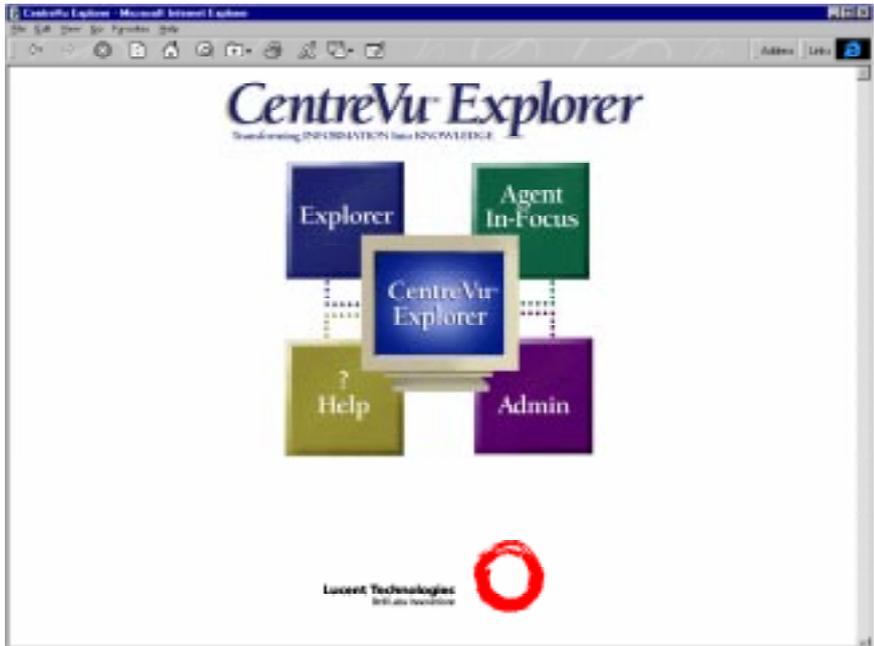
Click on **Explorer** to go to the query and reporting interface of *CentreVu* Explorer.

Click on **Agent In-Focus** to access predefined queries for common reporting scenarios.

Click on **Admin** to access screens where you can:

- Choose fields to display in query results
- Add, view, and edit agent names and login IDs
- Add or edit VDN names
- Add or edit split/skill names
- Add or edit Reason Codes

Click on **Help** to access *CentreVu* Explorer on-line help.

Screen Elements

The *CentreVu* Explorer window is divided into the following frames:

Element Selection Frame   Search Criteria Frame

Query Results Frame

Element Selection Frame—This frame contains the ECHI elements that are used to formulate queries. The ECHI elements are divided into two logical groups:

- Agent Info—Contains elements related to agent-based information.
- Call Info—Contains elements related to call-based information.

The element selection is made by clicking the box next to each element. Check marks appear at those elements selected for the current query. See

"Appendix A" in the *CentreVu Explorer User Guide* (585-215-840) for additional information on building queries.

Search Criteria Frame—This frame allows the user to enter parameters specific to the items selected in the query section when the "Build Query" button is selected. The search criteria frame also contains several elements used to control the execution of the query such as Start Date, End Date, and Max Rows Returned. For more information on how to provide search criteria to find the information you are looking for, see "Appendix A" in the *CentreVu Explorer User Guide* (585-215-840).

Query Results Frame—This frame displays the data that is returned for a query. The specific elements or columns that are returned are controlled by choices you make in the search criteria frame as described below.

Displaying Results

Explorer lets you display the results in three different formats as follows:
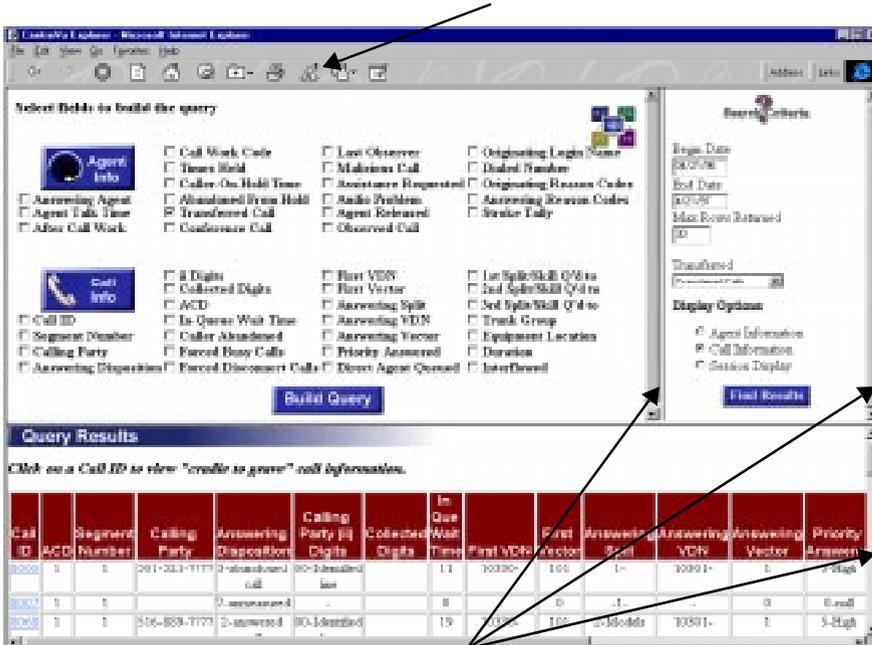

- **Agent Information**—The elements shown in the Agent Info section of the Element Selection Frame are displayed horizontally in table format.

- **Call Information**—The elements shown in the Call Info section of the Element Selection Frame are displayed horizontally in table format.

- **Session Display**—The elements deemed as "standard" for the call center are displayed. This allows the display of a subset of commonly requested information and eliminates the need for scrolling on terminal resolutions that do not allow full single-screen display of data.

Window Viewing and Sizing

Based on your screen size and terminal resolution, a varying amount of data may be displayed on a single screen. To vary the amount of data available on a single screen, the following options exist as shown below:

Browser Font Control

Scroll Bars

- **Scroll Bars**—Three scroll bars exist and appear in the event that all information is not presentable based on the current system and query requirements.

- **Browser Font Control**—In the Toolbar, the font size may be increased or decreased by sequentially stepping through the sizes by clicking on the font icon.

- **Screen Resolution**—Adjusting the screen resolution of your terminal to at least 1024 X 768 greatly enhances the viewable data in a single screen.

- **Reduce Search Criteria Section**—Moving the control bar between windows expands the results section.
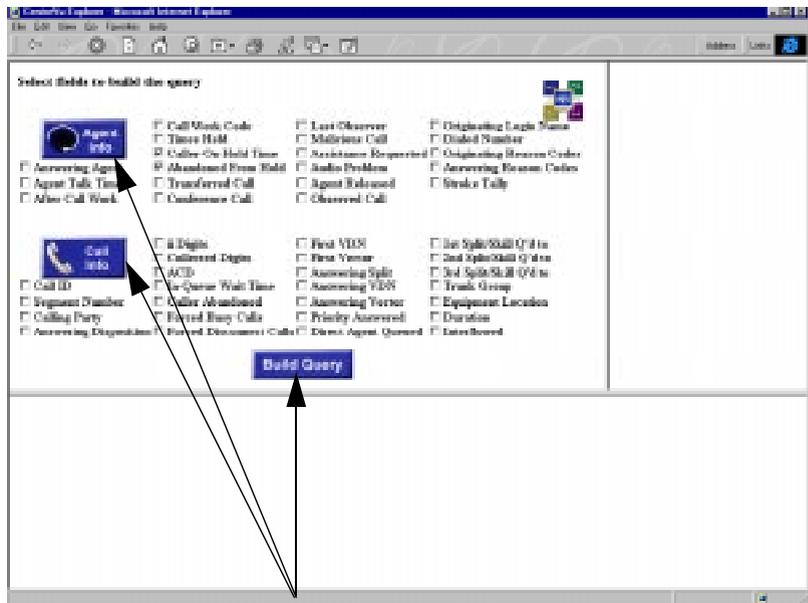
- **Session Display**—Viewing with the Session Display mode reduces elements to most commonly requested items. Additional details can be obtained in the cradle-to-grave reports.

- **Frame Resizing**—The individual frame boundaries can be dragged with the mouse to change the size of each frame independently.

A Quick Start to *CentreVu* Explorer

1. To enter *CentreVu* Explorer, click on the Explorer icon as shown below:
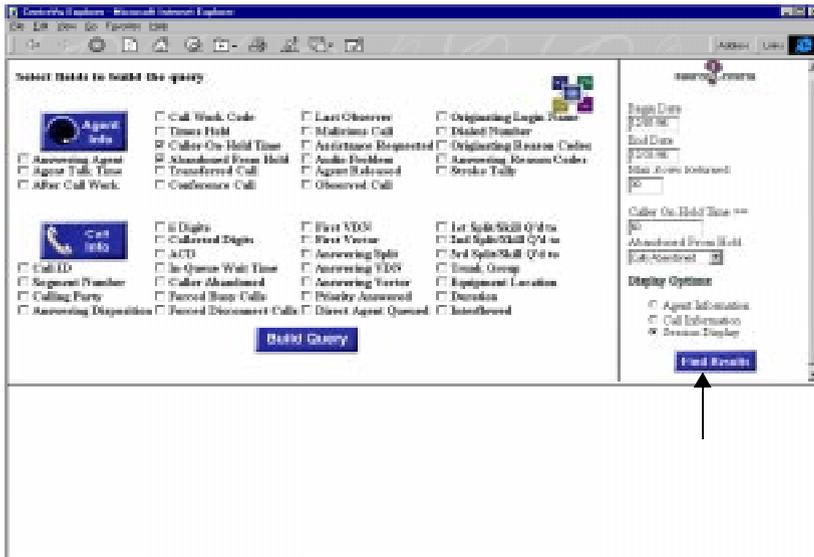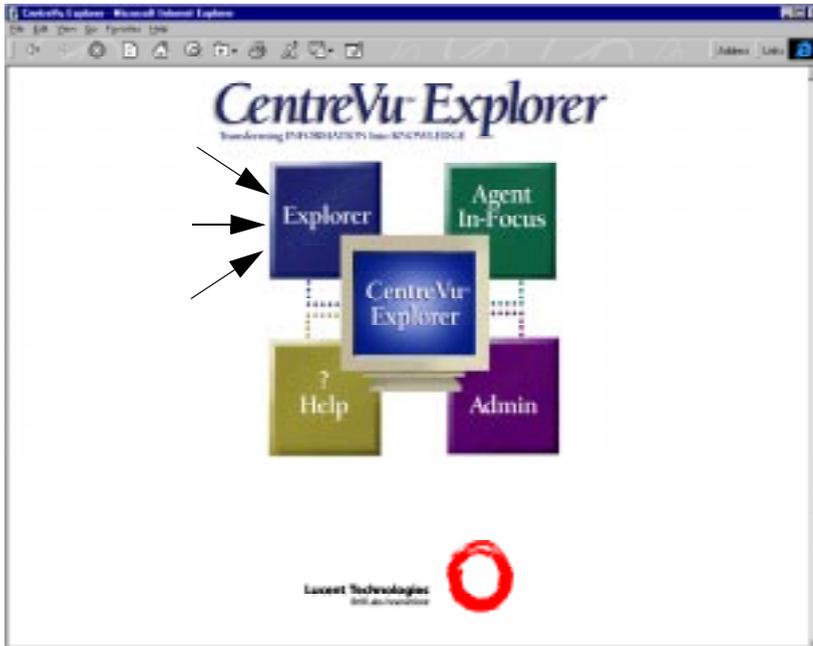
The Element Selection window appears:

Build Query Buttons

2. Check the query elements for your search and click on the "Build Query" button. See "Appendix B" in the *CentreVu Explorer User Guide* (585-215-840) for definitions and parameters for each of the query elements.)

Note: You may also click the Agent Info and Call Info icons to build the query.

When the following window refreshes, parameters for each of the
options you selected appear on the right side of the window. The query
control parameters for the date range and the maximum number of
rows of results to return also appear on the right side.

3. Enter a date range for your query.

4. Enter new values for the query options or search on the defaults shown.

5. Select one of the display options: Agent Information, Call Information,
    or Session Display.

6. Click **Find Results**.

The Query Results frame appears as shown below. This frame shows the results of your search. The top of the screen continues to display the query options frame.
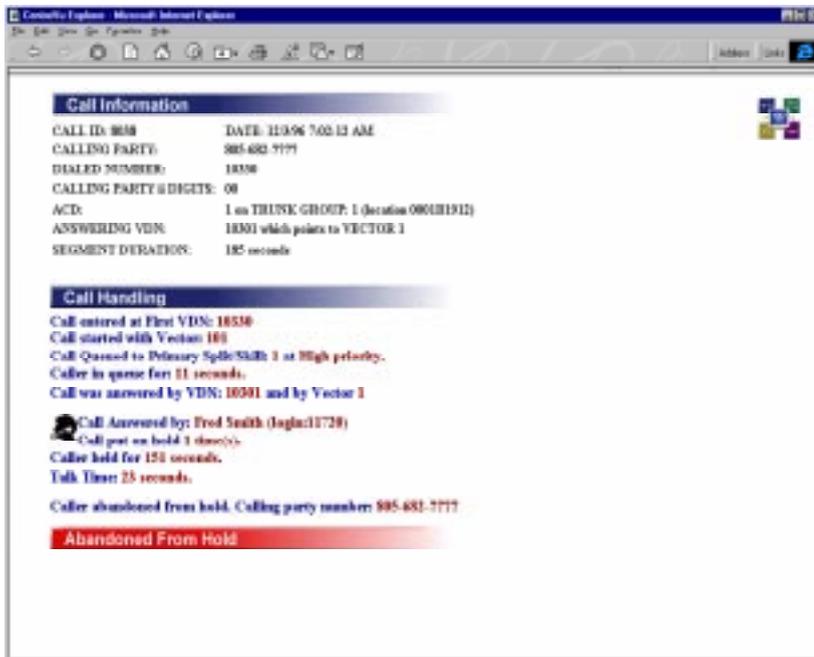
Note: Repeat the previous steps to drill down to more specific subsets of the call information.

7. By clicking on a Call ID you see a cradle-to-grave analysis of an individual call. This window shows the life of the call from the time the caller entered the call center until the call was disconnected.

The Cradle-to-Grave window appears as shown below:

Troubleshooting

Introduction

If you are having trouble with any of the procedures mentioned in this document, please read through this chapter before calling for help. The problem may be something that you can solve yourself.

If you have not solved the problem after reading through this chapter, contact the National Customer Care Center at 1-800-242-2121. (Lucent Technologies also offers fee-based installation consultation.) Customers outside the United States should contact their Lucent representative or distributor.

If you have received an error message(s) in the course of a failed installation, then record the message(s) in order to assist National Customer Care Center personnel in diagnosing your problem.

Troubleshooting Tips

This section will help you with problems you may encounter when installing *CentreVu*® Explorer, logging into *CentreVu* Explorer, or running *CentreVu* Explorer. Refer to the following tables for error messages that may appear:

- Table 1—Installation Error Messages
- Tables 2 through 5—NT Event Log Messages from SQL server and the Data Import Service (DIS).

NT Event Log Error Messages Types

Tables 2 through 5 contain NT Event Log messages that may appear during the life cycle of running *CentreVu* Explorer. The following types of error messages can appear:

- Information—Used primarily for informational messages. Usually not indicative of a problem.
- Warning—Indicates that the error may be problematic.
- Error—Indicates that a serious error occurred. This error class usually requires attention.

Using the NT Event Viewer to View NT Event Log Messages

The Windows NT Event Viewer is a graphical tool used to view information written to the NT Event Log. You can view NT Event Log messages by bringing up the NT Event Viewer as follows:

1. Click on the **Start** button on the Task Bar.
2. Click on the **Programs** menu choice.
3. Click on the **Administrative Tools** menu choice.
4. Click on the **Event Viewer** menu choice.

The newest messages are displayed first in the NT Event Log. You can choose the sort order by picking one from the **View** menu. Double click any message to get a dialog box with expanded details regarding the message.

Error Messages

Table 1: Installation Error Messages

Error Message	Corrective Action
This software will only run under Microsoft® Windows NT® Server 4.0 with Microsoft Internet Information Server 3.0 with ASP support installed.	Install Windows NT Server 4.0 before attempting to install *CentreVu* Explorer.
This installation requires NT administration rights.	The installer must be logged into the NT server with an account that has administration rights. Log onto NT with an account that has administration rights. If your account does not have administration rights, have your NT administrator create a temporary account for you.
This machine does not have the correct version of Internet Information Server installed. Please correct the problem by installing Internet Information Server 3.0 with ASP support before attempting to perform this install again.	The NT server must have Internet Information Server 3.0 with ASP support loaded before attempting to install *CentreVu* Explorer. Complete the Internet Information Server installation before attempting to install *CentreVu* Explorer.
This machine does not have the correct version of Microsoft SQL Server installed. Please correct the problem by installing Microsoft SQL Server 6.5 (Service Pack 2 recommended) before attempting to perform this install again.	The NT server must have Microsoft SQL Server 6.5 loaded before attempting to install SQL Server 6.5. Complete the SQL Server installation before attempting to install *CentreVu* Explorer.

Table 1: Installation Error Messages

Error Message	Corrective Action
Some critical Internet Information Server paths could not be found on this server's disk drives. Please contact your NT administrator and have them correct the problem, then run Setup again. The missing path name is \InetPub\ftproot Press OK to abort this installation.	Internet Information Server is not set up correctly. Have your NT administrator correct the problem before attempting to install *CentreVu* Explorer.

Table 2: SQL Server Error Messages

Error Message	Corrective Action
Error: 1105, Severity: 17, State: 2 Can't allocate space for object '*Syslogs*' in database '[*dbname*]' because the '*logsegment*' is full. If you ran out of space in Syslogs, dump the transaction log. Otherwise, use ALTER DATABASE or sp_extendsegment to increase the size of the segment.	An operation on the *CentreVu* Explorer database caused an internal database error. This error indicates that the database ran out of log space. Record the message and contact the National Customer Care Center.
Error: 1105, Severity: 17, State: 1 Can't allocate space for object '[*object name*]' in database 'tempdb' because the 'system' segment is full. If you ran out of space in Syslogs, dump the transaction log. Otherwise, use ALTER DATABASE or sp_extendsegment to increase the size of the segment.	An operation on the *CentreVu* Explorer database caused an internal database error. This error indicates that the database ran out of space. Record the message and contact the National Customer Care Center.

Table 2: SQL Server Error Messages (Contd)

Error Message	Corrective Action
Error: 1105, Severity: 17, State: 1 Can't allocate space for object '[*object name*'] in database 'tempdb' because the 'system' segment is full. If you ran out of space in Syslogs, dump the transaction log. Otherwise, use ALTER DATABASE or sp_extendsegment to increase the size of the segment.	An operation on the *CentreVu* Explorer database caused an internal database error. This error indicates that the database ran out of temporary table space. Record the message and contact the National Customer Care Center.
Mesg 17148 : SQL Server terminating due to 'stop' request from Service Control Manager INFORMATION	SQL Server was shutdown manually. Contact your database administrator to have the service restarted. Record the message and contact the National Customer Care Center.
SQL Server Scheduled Task: 7, 'Update Usage' -- Status: Failed -- Task Invoked on: 3/10/97 12:35:15 PM -- Message: DBCC execution completed. If DBCC printed error messages, see your System Administrator. (Message 2528) INFORMATION	No corrective action required.
SQL Executive Service successfully started	No corrective action required.

Table 3: Data Import Service Messages

Error Messages	Corrective Action
The service was started. INFORMATION	No corrective action required. This is merely an informational message.
The service was stopped. INFORMATION	No corrective action required. This is merely an informational message.

Table 3: Data Import Service Messages (Contd)

Error Messages	Corrective Action
The *CentreVu* Explorer Service was installed. INFORMATION	No corrective action required. This is merely an informational message.
The *CentreVu* Explorer Service was removed. INFORMATION	No corrective action required. This is merely an informational message.
The initialization process failed. WARNING	Record the message and contact the National Customer Care Center.
Could not read the file chr*nnnn.xxx* WARNING	The listed file could not be processed by the Data Import Service. Record the message and contact the National Customer Care Center.
chr*nnnn.xxx* file is either corrupt or invalid. INFORMATION	An External Call History data file from the CMS was not in the expected format. Record the message and contact the National Customer Care Center.

Table 4: ODBC Error Messages

Error Message	Corrective Action
[Microsoft][ODBC SQL Server Driver][SQL Server] Login failed WARNING	An attempt to login to SQL has failed. Record the message and contact the National Customer Care Center.
[Microsoft][ODBC Driver Manager] Connection not open WARNING	Record the message and contact the National Customer Care Center.

Table 5: DB-Library Error Messages

Error Message	Corrective Action
DB-LIBRARY error - Unexpected EOF from SQL Server. Connection broken. ERROR	The connection to SQL Server was lost. Record the message and contact the National Customer Care Center.
DB-LIBRARY error - DBPROCESS is dead or not enabled. ERROR	An attempt was made to communicate with a non-existent process. Record the message and contact the National Customer Care Center.
DB-LIBRARY error - Attempt to bind to a non-existent column.	The file format of the ECH file from the CMS does not match what was expected. Record the message and contact the National Customer Care Center.

Service Affecting Automated Procedures

This section documents the automated procedures that exist with *CentreVu* Explorer that cause service interruptions. The interruptions range from moments to over an hour in duration. The time of day is listed where applicable.

Data Import

The Data Import Service (DIS) runs continuously and is responsible for putting External Call History data from the CMS into the *CentreVu* Explorer SQL Server database. The DIS can be configured to check for the existence of new data from the CMS at any interval from 1 minute to several days.

Each time the DIS finds a file to import, it immediately inserts those records into the database. This has the potential to briefly lock out query requests for the duration of the import procedure. The import procedure typically lasts less than 1 minute for call centers with large volumes of ACD data. If the problem occurs frequently or the duration of the interruption is longer, contact the National Customer Care Center (1-800-242-2121).

Database Maintenance Procedures

CentreVu Explorer contains built-in database maintenance procedures designed to keep the database healthy and responsive. These procedures are automatically setup during the installation of *CenterVu* Explorer and are scheduled to run daily beginning at 1:00 a.m. The last scheduled task is scheduled to run at 4:00 a.m. These maintenance procedures vary in duration depending on the size of the database, the call traffic, and the hardware that hosts the *CentreVu* Explorer server. The durations can range from a few seconds to hours depending on these variables. Database backups should not be scheduled to run during these times.

There is a potential for these procedures to impact query performance. If you are experiencing performance problems during the hours that these procedures are scheduled, contact the National Customer Care Center (1-800-242-2121).

CentreVu
Explorer

Appendix A

NT Server Connection Assistance

The following sections provide assistance in connecting *CentreVu*® Explorer
to your local area network (LAN). In particular, these instructions pertain to
the administration of the Microsoft® Windows NT® Server 4.0.

Note: Refer to the Microsoft software support manuals and your network
administrator for further assistance.

Establishing Server Network Connection

Hardware

Communication between *CentreVu* Explorer and *CentreVu* Call Management System (CMS) is provided via a LAN connection. Additionally, for terminals external to the *CentreVu* Explorer server, access is provided via a LAN.

Networks may be one of the following:

- Ethernet
- Token Ring.

The appropriate hardware must be installed on *CentreVu* Explorer respective to the network topology. Follow the instructions provided with the hardware interface to install the card in your system.

Software

CentreVu Explorer must be configured as follows to properly communicate with the *CentreVu* CMS. This configuration is accessed via the network system settings on your system. To access these settings:

1. Click the **Start** Button, point to **Settings**, and click **Control Panel**.

2. Double click the **Network** icon. This assigns the software configurations detailed in the following sections.

CentreVu **Explorer Server Identification**

Select the **Identification** tab in the Network Administration window. The
following screen is shown:
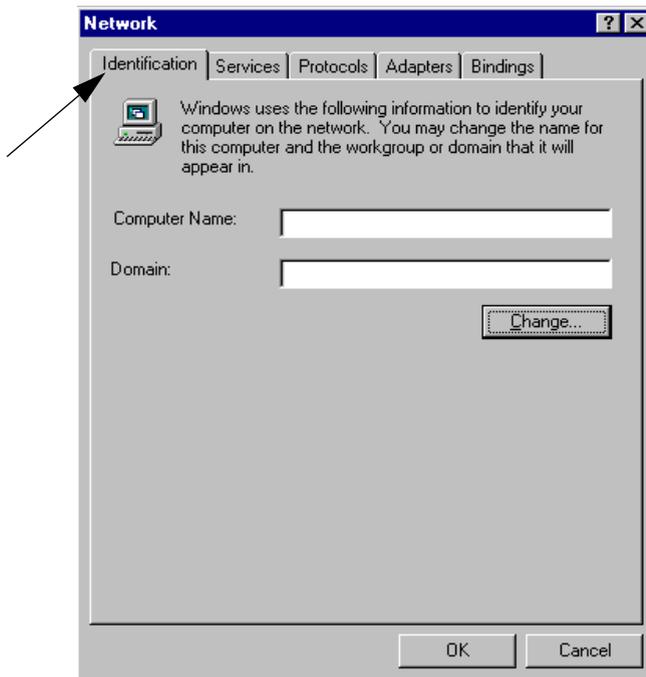
Enter the following information:

1. Computer Name—This provides a place to type the host name for
   your computer. This is the name of the *CentreVu* Explorer server.
   This might be a name you use to identify your computer on a
   smaller, local network. The host name is combined with a domain
   name or suffix to create your intranet address.

2. Domain Name—This provides a place to type the name of the
   domain for your computer. Domain refers to a set of computers on a
   network that have been assigned a group name. For example, a
   company's domain name on the internet might be
   "thiscompany.com." A domain might contain two or more
   workgroups.

CentreVu **Explorer Protocol Assignment**

The Ethernet or Token Ring assignments must be made to successfully connect to the network. This is done in the Protocols tab of the Network Administration window. Following is a representative setup of an Ethernet environment.

Select the **Protocols** tab from the Network dialog box.
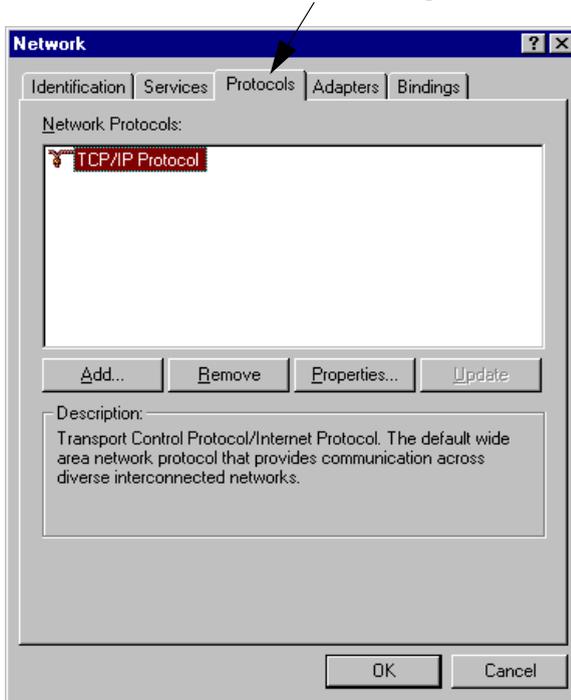
Select the TCP/IP Protocol item from the **Protocols** tab of the Network dialog box. The following window is displayed:
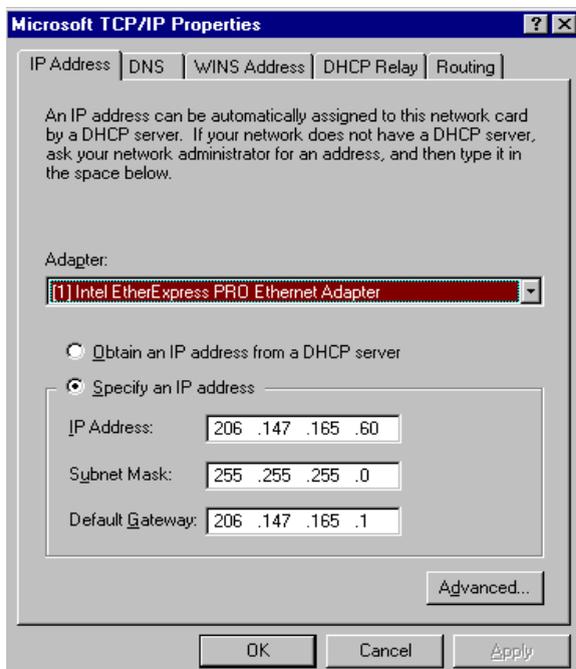
Enter the appropriate IP address for the *CentreVu* Explorer server. Also enter the Subnet Mask and Default Gateway information.

1. IP Address—Enter the IP address obtained from your network administrator. An IP address is 4 numbers from 0 to 255, separated by periods.

2. Subnet Mask—Enter the Subnet Mask number obtained from your network administrator. This number combined with the IP address identifies the network your computer is on.

3. Default Gateway—Enter the number for the gateway you want to add. The value in each field must be a number between 0 and 255. A gateway is a connection or interchange point that connects two networks that would otherwise be incompatible. For example, a LAN may need a gateway to connect it to a WAN or to the Internet.
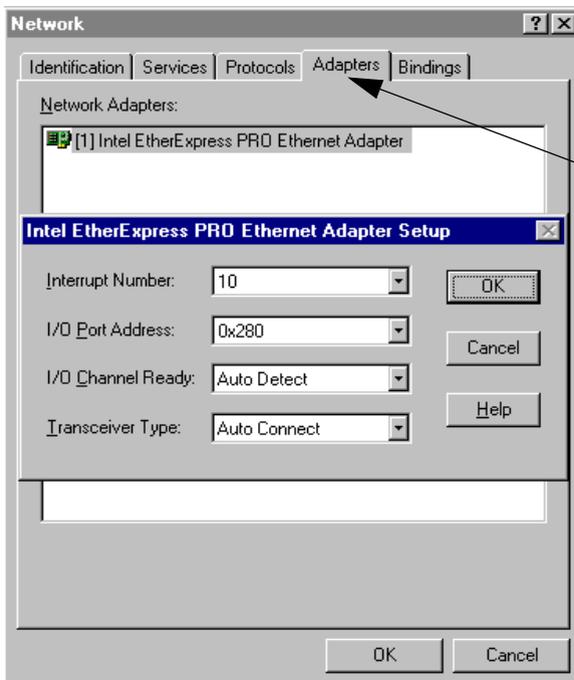
The DNS Server information is configured via the **DNS** tab. After selecting the **DNS** tab, the following screen appears:
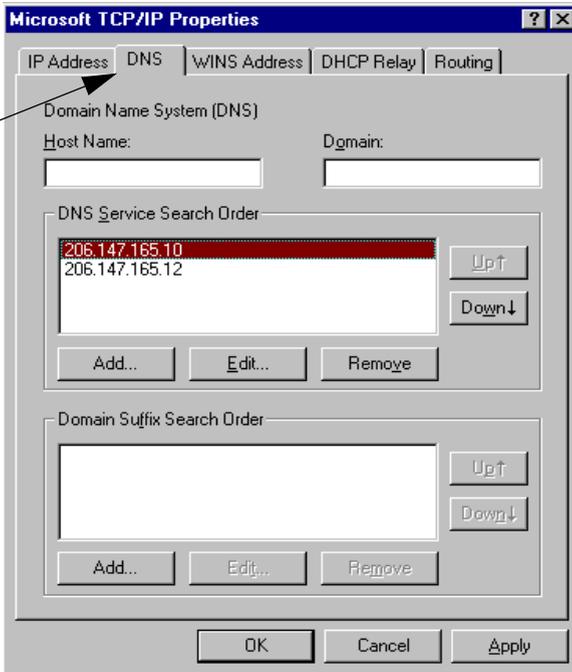
The following information is required:

- Host Name—Enter the same information entered in the Computer Name field in the Identification tab.

- Domain—Enter the same information entered in the Domain field in the Identification tab.

Set the adapter to Auto Detect in the **Adapters** tab.

 Caution After setting up the system software, you must restart your computer for the changes to take effect. Exit all programs and save any work in progress.

If you are still experiencing problems, contact your network administrator for the proper software setup.