



Agent Assist 2.9.2

Super Guide

Abstract

The purpose of this document is to provide the Lucent Technologies Technical Support Organization (TSO) with a complete description of and resolution for known problems with the Agent Assist (AA) product developed by NICE CenterPoint Solutions, Inc. This document is intended for Tier II and Tier III support staff within the TSO's Technical Service Center (TSC). This Troubleshooting Guide will be modified and amended as necessary during the entire product life cycle of AA. Feedback on the effectiveness of this document is crucial to AA's success. Please do not hesitate to share your opinions with NICE CenterPoint Solutions, (303) 382-6300. Your feedback is appreciated.

AGENT ASSIST OVERVIEW	5
RECORDING TYPES	5
SYSTEM CONFIGURATION AND REQUIREMENTS	6
SYSTEM SOFTWARE REQUIREMENTS	6
SYSTEM HARDWARE REQUIREMENTS	7
AGENT ASSIST SCHEDULED RECORDING PROCESS.....	10
TEN EASY STEPS	10
STEP ONE	10
STEP TWO	11
STEP THREE	12
STEP FOUR	12
STEP FIVE	13
STEP SIX	13
STEP SEVEN	14
STEP EIGHT	15
STEP NINE	16
STEP TEN.....	16
SERVER (CONVERSANT) SOFTWARE	17
SERVER (CONVERSANT) INSTALLATION/UPGRADE	17
ADDITIONAL STEPS FOR NEW INSTALLATION OF AGENT ASSIST ON V8	18
DIRECTORIES CREATED.....	20
FILES INSTALLED	20
INITTAB FILE.....	23
SERVICES FILE.....	23
HOSTS FILE.....	24
BACKING UP, RESTORING, AND MIGRATING DATA FILES	25
LICENSE TOOL	32
SERVER (CONVERSANT) DATABASE TABLES	33
TABLES CREATED WITH PACKAGE PIPELINE	33
Table pl_aaadmin	33
Table pl_agentlist.....	34
Table pl_holidays	35
Table pl_ports.....	35
Table pl_starfields	36
Table pl_supervisors	36
Table pl_sysadmin	37
Table pl_sysparam.....	37
TABLES CREATED WITH PACKAGE AGTASSTC	38
Table pl_recordings	38
INSTALLING AND CONFIGURING ORACLE SQL*NET (ON THE CONVERSANT)	40
CONVERSANT COMPONENTS	42
PLAYBACK PORTS	42
RECORDING PORTS.....	42
PLRECORD.....	42
PLSERVER	42
ORACLE DATABASE	42
SQL*NET.....	42

EBSUS - FEMALE	42
CLIENT SOFTWARE.....	43
CLIENT INSTALLATION/UPGRADE.....	43
DIRECTORIES	43
FILES INSTALLED	44
AGENT ASSIST DIRECTORY	47
AGENT ASSIST PROGRAM GROUP	47
LVP DIRECTORY	47
SERVICES FILE.....	47
INSTALLING AND CONFIGURING ORACLE SQL*NET (ON THE CLIENT)	50
RUNNING SETUP	50
MODIFY THE "HOSTS" FILE	50
CREATE AN ODBC DATA SOURCE NAME (DSN) FOR THE CONVERSANT SERVER	51
TEST THE ODBC CONNECTION TO THE CONVERSANT.....	51
SWITCH (DEFINITY) SETTINGS.....	53
VERIFY THAT THE RECORDED EXTENSION IS SERVICE OBSERVABLE	53
VERIFY THAT THE SERVER'S PORTS CAN SERVICE OBSERVE.....	53
SERVICE OBSERVING FEATURE ACCESS CODE	53
HELPFUL SUPPORT PROCEDURES.....	54
SERVER (CONVERSANT) PROCEDURES	54
Verifying that Enhanced Basic Speech is installed.....	54
Restarting the plrecord process.....	54
Restarting the plserver process.....	54
Finding the server's network name	55
Checking the Playback Service state.....	55
Checking for other services on a port	55
Verify the Playback Service extension	55
Determining the Amount of Space Available on the Disk Partition.....	56
Agent Assist Debugging Output	57
How to Review Debug Output	57
How to Stop a Debug Session	57
CLIENT PROCEDURES	58
Verify the Playback Service port assignment.....	58
Find the Playback Service extension	59
Changing the CONVERSANT Recording Algorithm	60
Verify the service observing FAC setting.....	61
Update the client's hosts file	62
Update the client's services file	63
Pinging the server.....	64
Checking the version of pipeline.ocx	65
Determining the amount of space available on a hard drive	65
SQL*NET/ODBC PROCEDURES	66
Testing ODBC connection	66
COMMON INSTALLATION & MAINTENANCE PROBLEMS	67
THE WINDOWS CLIENT APPLICATION CANNOT CONNECT TO THE SERVER.	67
RECORDING SPECIFIC INFORMATION IS NOT SPOKEN BY THE PLAYBACK SERVICE WHEN MESSAGES ARE RETRIEVED VIA THE TELEPHONE.	67
THE PLAYBACK SERVICE DOES NOT ANSWER WHEN CALLED.	68
THE STATUS OF A RECORDING IS "REORDER TONE (FAST BUSY) INSTEAD OF COMPLETED (NO ERROR).....	68

THE RECORDING APPEARED TO COMPLETE WITHOUT ERROR, BUT WHEN IT IS PLAYED BACK IT SOUNDS LIKE A SIREN.	68
SOME RECORDINGS HAVE A STATUS OF " COMPLETED/NO RECORDING MADE"	68
RECORDINGS APPEAR TO BE COMPLETELY MISSING FROM RETRIEVER, AO, OR CEO.	68
THE USER IS UNABLE TO SCHEDULE A RECORDING FOR A USER BECAUSE THE USER DOES NOT APPEAR AS A CHOICE WHEN SETTING UP THE RECORDING.	69
THE AGENT ASSIST CLIENT HAS BEEN INSTALLED; HOWEVER, SOME OF THE PROGRAMS DO NOT APPEAR IN THE AGENT ASSIST PROGRAM GROUP (GENERALLY ADMINISTRATOR AND PORT MANAGER).	69
RECORDINGS ARE BEING MADE ONE HOUR LATER OR EARLIER THAN SCHEDULED.	69
THE USER IS UNABLE TO RETRIEVE RECORDINGS FROM THE SERVER TO THE PC.	69
A RECORDING STARTS WITHOUT A PROBLEM AND THEN MOVES TO A STATUS OF ERROR (COMPLETE).	69
FIXES AND ENHANCEMENTS FOR AGENT ASSIST	70
PORT MANAGER AND PIPELINE SERVER 2.9.1	70
PORT MANAGER AND PIPELINE SERVER 2.9.2	70
AGENT ASSIST 2.9.1	71
AGENT ASSIST 2.9.2	71

Agent Assist Overview

Agent Assist is an application that allows call center managers to record telephone calls of call center agents. It is comprised of five applications that record complete or partial conversations and other audio events using the CONVERSANT Voice Information System as a call processing/recording server with an external Microsoft windows client as an application administration and activation tool.

- **Agent Observing (AO)**
- **C.E.O. (Customer Experience Observing)**
- **Malicious Call Recording (MCR)**
- **S.T.A.R. (Spontaneous Telephony Agent Recording)**
- **AgentNow!**



Agent Assist is a client-server application. Each of the five applications listed above has its own client component but communicates with one server, that resides on the Lucent Technologies CONVERSANT System. The client components reside on a desktop personal computer running Microsoft Windows 95, Windows 98, Windows 2000, and Windows NT 4.0 operating systems.

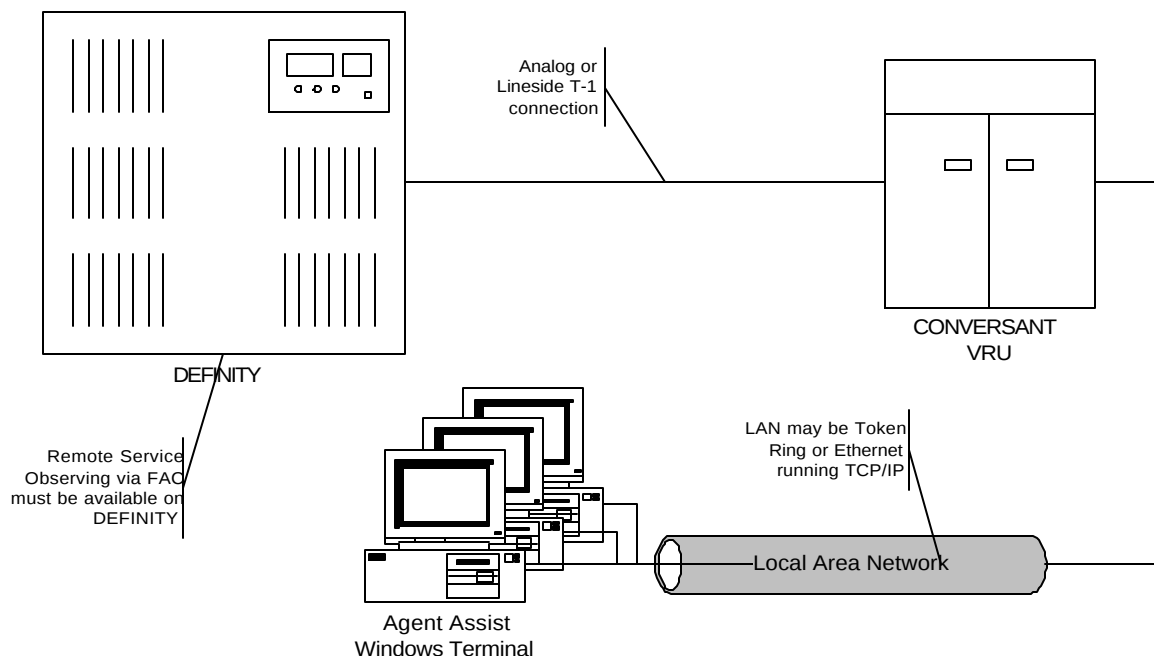
Recording Types

There are two methods of activating or initiating the recording process:

- **Scheduled** - Recordings are assigned at some point prior to the actual event. When the time for the scheduled event is reached, the CONVERSANT automatically grabs a port, dials the service observing feature access code, dials the extension to be recorded and begins recording the call for a preset time interval as administered by the user.
- **On-Demand** - Recordings begin immediately based on activation from the desktop client. Clicking the desktop icon associated with the feature performs activation. The CONVERSANT grabs a port, dials the service observing feature access code, dials the extension to be recorded and begins recording the call until a subsequent message is received from the same desktop client indicating that recording should stop.

System Configuration and Requirements

Following is a diagram of a typical network configuration for Agent Assist.



System Software Requirements

CONVERSANT

- Version 6.1 or later
- Oracle RDBMS
- Enhanced Basic Speech - US_English – Female (ebsUS)

CLIENT

- Windows 95/98
- NT Workstation 4.0
- NT Server 4.0
- Windows 2000 (Agent Assist Version 2.9.2 and higher)

NOTE: If using Windows NT 4.0 you must have the latest Service Packs. If during installation you receive the message the Service Packs have not been applied you must download Service Pack 4 for the proper machine. For example, if you have a Windows NT Workstation, you need to download Service Pack 4 for Windows NT Workstations. The Service Packs can be downloaded from the World Wide Web at <http://www.microsoft.com/NTworkstation>. This URL could change; please check with Microsoft if the location differs from the above.

NOTE: As of Agent Assist 2.9.2, if SQL*NET TCP/IP V1/V2 (ora7sql) is installed on the CONVERSANT and the client is configured to use ODBC, then some database queries will be made via ODBC/SQL*NET. If not, all database transactions will be made via the Pipeline OCX.

System Hardware Requirements

CONVERSANT

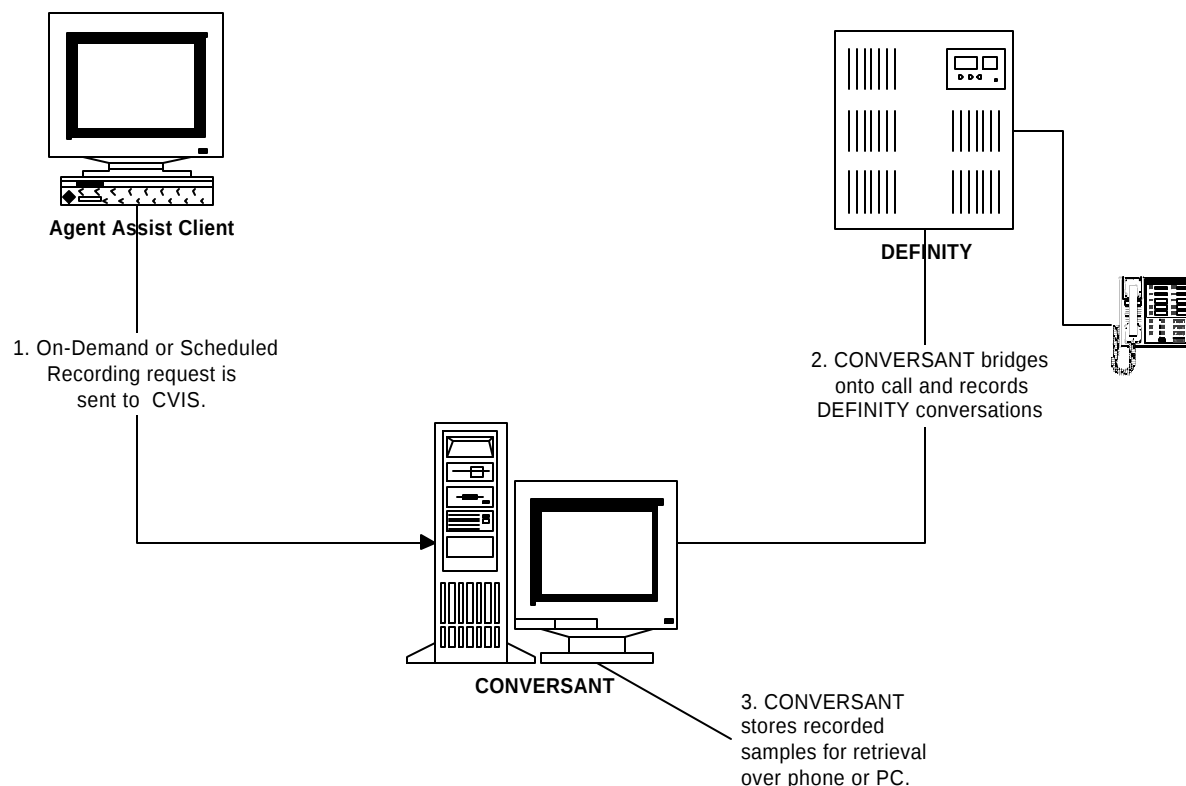
- Disk Space – available hard disk space is required to store the recordings. The amount of disk space required is dependent on number and length of these voice files as well as length of time they will be stored on the CONVERSANT.
- Analog and/or T1 line side ports – Spare ports are required to make recordings and to listen to them via the VUI.
- To administer and activate the Agent Assist application, the client workstation must be able to communicate to the CONVERSANT over a local area network using TCP/IP. To do this, the CONVERSANT must have a Network Interface Card (NIC).

CLIENT

- 233MHz Pentium Processor
- 128MB of RAM
- 48MB of available hard disk space
- CD ROM Drive
- 15" Monitor
- Network Card (Ethernet or Token Ring)
- Sound Card and Speakers (highly recommended)

System Software Architecture

A simple client-server architecture is employed to administer, activate and maintain the Agent Assist features.



The basic feature processes are:

1. **Recording Activation/Administration** - The initial step involves the establishment of a "begin recording" notification to be set within the CONVERSANT. There are two ways to establish this. "On-demand" (immediate) or "schedule" to record at a later time. To begin immediate recording, "click" on either S.T.A.R., AgentNow! or Malicious Call Recording. The CONVERSANT collects the appropriate user information, dials the service observing feature access code, and begins recording. "Scheduled" recording involves entering a stop/start date and time into a desktop schedule form. These activities are then sent to the CONVERSANT.
2. **Recording Audio Samples** - The CONVERSANT receives an indication to record (either immediate or when the scheduled time is reached) and makes a recording as indicated by the administered items. Depending on the Agent Assist feature, the CONVERSANT will collect audio samples based on the voice terminal extension or Vector Directory Number (VDN). When recording on a VDN basis, all audio portions occurring during the call, regardless of any terminating voice terminals, is captured in the sample. Only the C.E.O. feature records on a VDN basis.
3. **Retrieve/Manage Audio Samples** - Audio samples are stored on the CONVERSANT for later retrieval. Using the Agent Assist Recording Retriever feature, you can:

- Retrieve and play the recording on the PC
- Call the CONVERSANT and listen to the recording
- Archive the recording from the CONVERSANT to another storage location such as a removable floppy diskette or alternative directory on another server.
- Delete all recordings to protect against filling up the CONVERSANT disk storage system.

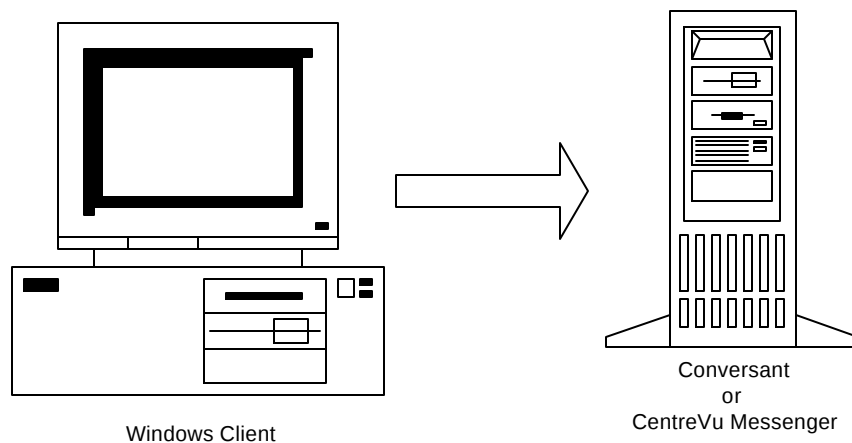
Agent Assist Scheduled Recording Process

Ten Easy Steps

STEP ONE

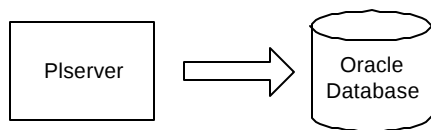


The user schedules a recording using the Scheduling Wizard in either the Agent Observing or Customer Experience Observing client application. To schedule recordings for Agents, the Agent Observing client is used. To schedule recordings for VDNs, the Customer Experience Observing client is used.

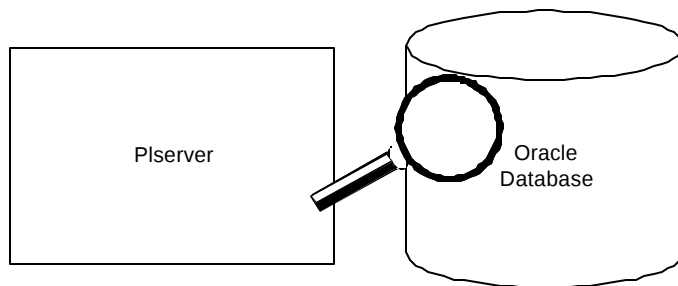
STEP TWO

When the scheduling process is complete the recording request is sent to the CONVERSANT where it is received by the plserver process. The request is sent using the TCP/IP protocols. In order for the message to successfully make it to the CONVERSANT, the client PC must be able to 'ping' the CONVERSANT.

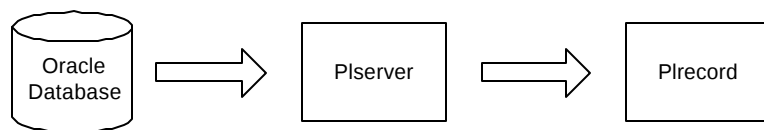
TCP/IP communication between the client and server is managed through the Pipeline.ocx on the client and the plserver process on the CONVERSANT. Entries are added to the services files on both machines to tell Agent Assist over which virtual port to communicate. The request sent by the client via the Pipeline.ocx comes in to the plserver process on port 39910 (this is a virtual communications port – not to be confused with the CONVERSANT's physical voice ports), as specified in the etc/services file.

STEP THREE

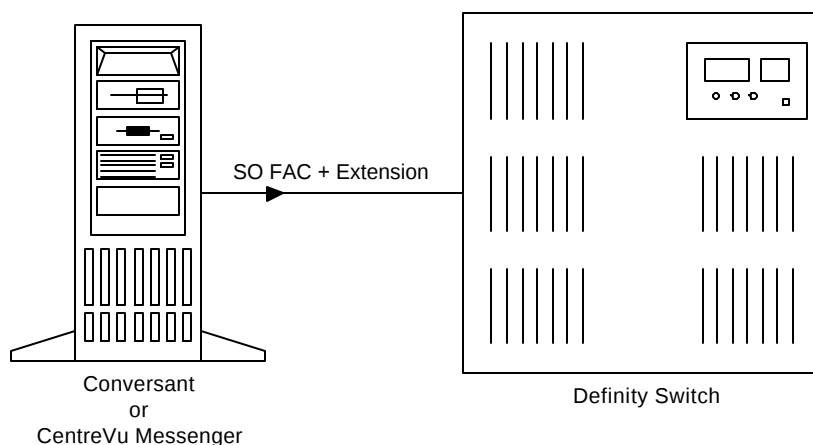
The plserver process then deciphers the TCP/IP messages from the client and updates the pl_recordings table in the database with the information sent. The scheduled recording is entered into the database with a status of 'P' for pending.

STEP FOUR

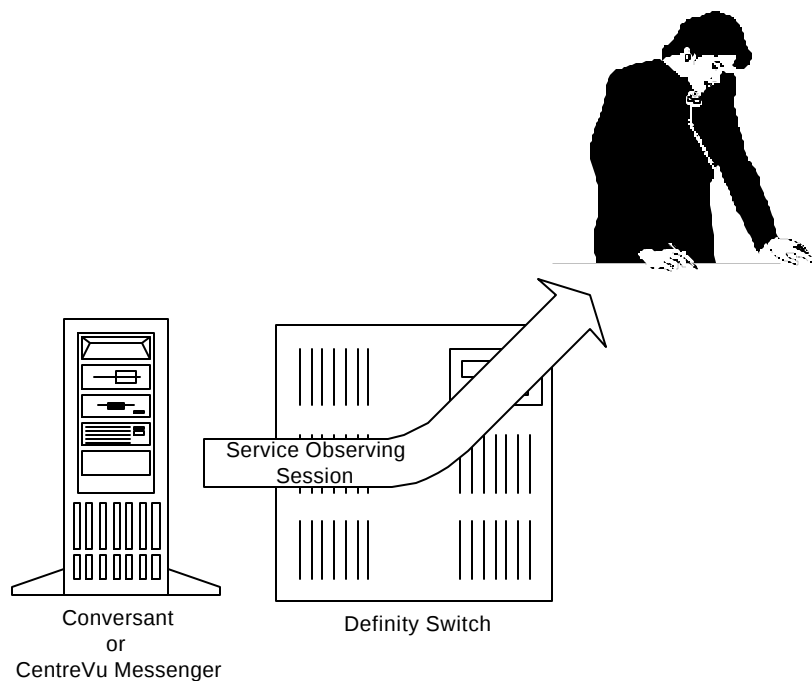
The plserver process regularly scans the database to determine whether or not it is time to initiate the recording request. First it checks the pl_ports table for ports that are assigned for making Agent Assist recordings. If it does not find any ports which are assigned to make Agent Assist recordings, it will not check for scheduled recordings. Otherwise it looks in the pl_recordings table for recordings with a status of pending and a requested start time of before or equal to the current CONVERSANT time.

STEP FIVE

If the plserver process finds any recordings ready to be made, it resets the status to in-transit and informs the plrecord process.

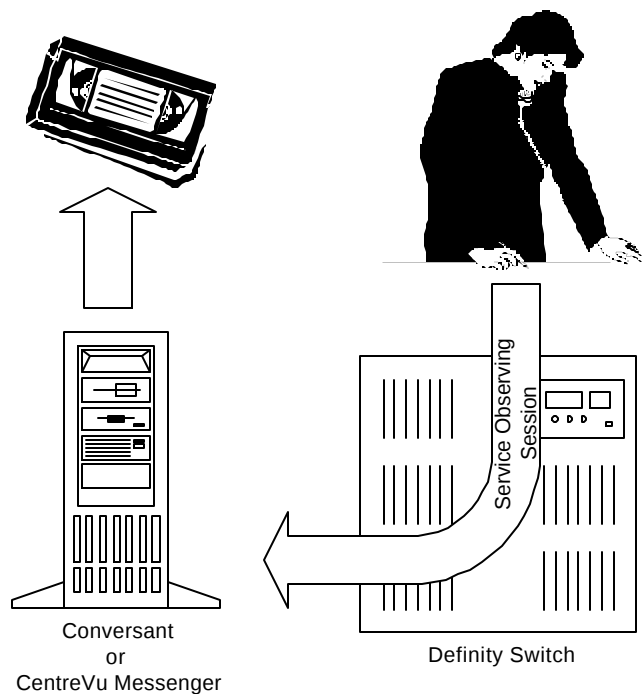
STEP SIX

The plrecord process acquires a telephone line from the CONVERSANT by looping through the voice ports and finding one that is usable for recording and on hook (not in use). If all ports are currently in use but the request is for an application with a higher priority, the plrecord process will stop a recording currently being made by the lower priority application and start this new, higher priority request. The plrecord process then updates the database, setting the status of the recording to active and places a service observing call to the switch by dialing the service observing feature access code. To the switch, the call is indistinguishable from a service observing call placed manually by a person. The plrecord process then dials the extension to be recorded or the agent id of the agent to be recorded. The latter is based on customer preference and the configuration of their switch. Either way is a valid method for service observing.

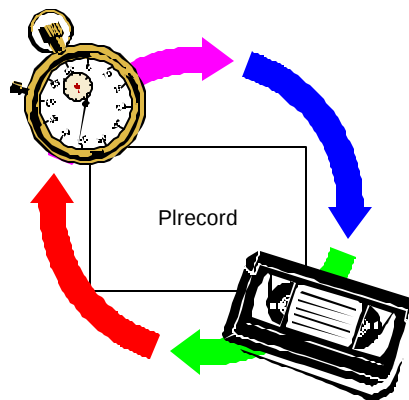
STEP SEVEN

The switch initiates the requested service observing session.

Note: In order to do this, all agents and VDNs to be recorded must be designated as service observable and all CONVERSANT ports must be designated as able to service observe on the DEFINITY switch.

STEP EIGHT

The plrecord process tells the CONVERSANT to record the telephone line that it used to place the service observing call. The recording is written to a file in the `/usr/add-on/centerpoint/agentassist/recordings` directory. This is actually a virtual directory pointing to `/voice1/vfs/recordings/agentassist`. The reason for doing this is that the first directory exists in the root file system, which is roughly equivalent to the system partition in Windows. If the root file system runs out of disk space the Unix box becomes unstable and crashes. Voice files tend to be very large, so it is important not to store them in the root file system.

STEP NINE

Every four minutes, precord issues another command to continue the recording. This is done to prevent the recording session from timing out if there is silence on the line. So one 40-minute recording would actually be 10 4-minute recordings. This is transparent to the end-user however. Scheduled recordings have limit of one hour and on-demand recordings have a limit of two hours.

STEP TEN

When the requested recording length is reached, precord stops recording, updates the database, & hangs up the telephone line that it was using.

When someone wants to listen to the recording, they can either call the CONVERSANT and listen to the recording over the phone, or they can save the file to their PC and listen to it through their PC speakers.

Server (CONVERSANT) Software

There are two packages that must be installed on the CONVERSANT in order to run Agent Assist – pipeline (Pipeline Server) and agtastc (Agent Assist) – each of which are available on a separate set of floppy disks. The latest version of Agent Assist 2.9.2, requires Pipeline Server 2.9.2 to run properly. If the customer has any other NICE CenterPoint Solutions products (CallBack Manager or Form Manager) which are running with a previous release of Pipeline Server, they will need to be upgraded as well. Versions of NICE CenterPoint Solutions products that are compatible with Agent Assist 2.9.2 are as follows:

Pipeline Server 2.9.2 (package name: pipeline)
 CallBack Manager 1.3.2 (package name: callback)
 Form Manager 1.3.2 (package name: formmgr)

There is only one set of installation diskettes for each product. The installation diskettes will check whether the CONVERSANT is Version 6, Version 7, or Version 8 and make the appropriate installation. Agent Assist will not install properly on Version 5 or lower; it will also not run on CentreVu Messenger. The installation diskettes will also determine whether the NICE CenterPoint Solutions product is already installed and will upgrade to the latest version if necessary. Pipeline Server and Agent Assist will not upgrade versions earlier than 2.5.

Checking CONVERSANT Version – Type “*pkginfo -l vs*” V6 will return *i.2.x* and V7 will return *i.3.x*

Server (CONVERSANT) Installation/Upgrade

To upgrade or install Agent Assist the following steps should be taken:

1. If the customer has the PS27+a, AA27+a, or FM11+a patches, they should remove the patches using `pkgrm` before upgrading. The actual product packages (pipeline, callback, formmgr, agtastc) should NOT be removed before upgrading – if they are, the customer's data will be lost. To remove the patches type:

`pkgrm package_name` where `package_name` is either PS27+a, AA27+a, or FM11+a

2. Install or upgrade Pipeline Server by putting the first floppy disk in the floppy drive and typing:

`pkgadd -d diskette1 pipeline`

The installation scripts will prompt for other floppies as required. Pipeline Server will need to be upgraded if the version is earlier than 2.9.2.

3. Install or upgrade Agent Assist by putting the first floppy disk in the floppy drive and typing:

`pkgadd -d diskette1 agtastc`

The installation scripts will prompt for other floppies as required. Agent Assist should be upgraded if the version is earlier than 2.9.2.

4. Upgrade CallBack Manager if it is already installed on the CONVERSANT and the version is earlier than 1.3.2 by putting the first floppy disk in the floppy drive and typing:

`pkgadd -d diskette1 callback`

5. Upgrade Form Manager if it is already installed on the CONVERSANT and the version is earlier than 1.3.2 by putting the first floppy disk in the floppy drive and typing:

```
pkgadd -d diskette1 formmgr
```

Additional Steps for New Installation of Agent Assist on V8

Since the Oracle database is not necessarily included on the CONVERSANT V8 platform, the tables required for Pipeline Server and Agent Assist are not automatically created during the pkgadd. Therefore, the tables must be created in a separate series of steps after you have verified that Oracle is installed. If Agent Assist is being upgraded from a previous version, it is not necessary to perform these steps.

Note: Upgrades assume that the database is there and will automatically attempt to make any necessary modifications to the schema. DO NOT UPGRADE A PACKAGE ON V8 IF ORACLE IS NOT INSTALLED. If Oracle is not yet installed but Pipeline 2.9, Callback 1.3, Agent Assist 2.9, or Form Manager 1.3 are installed, remove these packages using pkgrm and then install them again using the new floppies to avoid trying to modify database tables which do not exist.

1. To create the Oracle tables login as root.
2. At the command prompt, type the following:

```
/usr/add-on/centerpoint/bin/create_all
```

The following screen appears:

```
***** Main Menu *****

Enter 1 to complete installation.
      (this is the same as selecting 2, 3, 4, and 5 below)
Enter 2 to create database tables only.
Enter 3 to copy CS4I0pipeline to /etc/conf/init.d only.
Enter 4 to start the plserver process only.
Enter 5 to configure tnslsnr to start on reboot.
Enter q to quit.
```

Please enter a choice here [RECOMMENDED CHOICE IS 1]:

3. Type 1 and hit the ENTER key.

After the script completes, you will see some output indicating that the tables have been successfully created and you will be placed at the command prompt.

4. To create the tables for Agent Assist, type the following at the command prompt:

```
/usr/add-on/centerpoint/agentassist/bin/create_all
```

The following screen appears:

```
***** Main Menu *****

Enter 1 to complete installation.
```

(this is the same as selecting 2, 3, and 4 below)
Enter 2 to create database tables only.
Enter 3 to copy CS4I1agtasstc to /etc/conf/init.d only.
Enter 4 to start the plserver and plrecord processes only.
Enter q to quit.

Please enter a choice here [RECOMMENDED CHOICE IS 1]:

5. Select 1 and hit the ENTER key.

After the script completes, you will see some output indicating that the tables have been successfully created.

6. Logout.

Directories Created

The following table contains a list of the directories created when Pipeline Server 2.9.2 and Agent Assist 2.9.2 are installed:

Directory	Description
/usr/add-on/centerpoint/bin	Executables for Pipeline Server
/usr/add-on/centerpoint/export	Holding place for backup & restore operations
/usr/add-on/centerpoint/log	Logfiles for Pipeline Server
/usr/add-on/centerpoint/util	Tools and utilities.
/usr/add-on/centerpoint/agentassist	Pipeline Recorder main directory
/usr/add-on/centerpoint/agentassist/bin	Executables for Pipeline Recorder
/usr/add-on/centerpoint/agentassist/log	Logfiles for Pipeline Recorder
/usr/add-on/centerpoint/agentassist/prompts	Voice files for the playback service
/usr/add-on/centerpoint/agentassist/recordings	A link to "/voice1/vfs/recordings/agentassist"
/voice1/vfs/recordings/agentassist (/usr/add-on/centerpoint/agentassist/recordings is created as a link to this directory)	Holds voice recordings made by Agent Assist

Files Installed

The following tables contain a list of files created when Pipeline Server 2.9.2 and Agent Assist 2.9.2 are installed:

/usr/add-on/centerpoint/bin

Name	Description	Size (Bytes)
backup.ksh	Scripts to backup and restore the database and files	2514
restore.ksh		3378
include		376
migrate.ksh	Scripts to migrate and replace the database and files	2028
replace.sql		164
create_all	V8 only - Script used to create tables and do final configuration. These steps are broken out since Oracle is optional and may not be installed at the time NICE CenterPoint products are.	3697
CS4I0pipeline	V8 only – copied to /etc/conf/init.d when create_all is run. Modified to call plserver_script to restart the plserver process.	60(V8)
imdrop.sql	Drops table before restore.	1163
license_tool	Tool to see which products are licensed.	28408(V8) 1527120(V7) 1733588 (V6)
plserver	Pipeline Server, handles communication with the Windows client.	187500(V8) 1672456(V6) 2150700(V6)
plserver_script	V8 only – exports the LD_LIBRARY_PATH and starts the plserver process.	166
plsvrstart	Used to start plserver.	197
plsvrstop	Used to shutdown plserver.	662

/usr/add-on/centerpoint/agentassist/bin

Name	Description	Size (Bytes)
create_all	V8 only - Script used to create tables and do final configuration. These steps are broken out since Oracle is optional and may not be installed at the time NICE CenterPoint products are.	3068
CS4I1agtassta	V8 only – copied to <code>etc/conf/init.d</code> when create_all is run. Modified to call <code>plrecord_script</code> to restart the <code>plrecord</code> process.	72
plrecord	Pipeline Recorder, places and records service observing calls	218984 (V8) 1635640 (V7) 1996252 (V6)
plrecstart	Used to start Pipeline Recorder	210
plrecstop	Used to shutdown Pipeline Recorder	764
tablefix.sh	A script that can be used to run <code>tablefix.sql</code> , which contains SQL to create tables which occasionally do not get created upon installation.	952
tablefix.sql	SQL to create tables <code>pl_surveyport</code> , <code>pl_supervisors</code> , and <code>pl_recordings</code> .	2871
tablefix.txt	Instructions detailing how to run <code>tablefix.sh</code> .	278

/usr/add-on/centerpoint/agentassist/prompts – used for playback service

Name	Transcription of Voice File	Size (Bytes)
1000	Welcome to the Agent Assist Recording Player.	22752
1001	To hear a specific recording enter the id followed by the pound sign. To hear a list of recordings for a given extension, enter the extension followed by the star key.	41890
1005	To exit press the star key.	11000
1006	To hear another recording press the pound key.	14066
1007	Thank you for using Agent Assist.	15816
1008	Requested recording	9762
1009	Was not found	7006
1010	Please try again.	5672
1011	No recordings for extension	9304
1012	Are available for playback	9814
1100	Id	3928
1101	Was recorded for extension	10592
1102	On	5340
1103	For	3336
1104	Seconds	3878
1105	There are	4110
1106	Recordings for extension	8500
1200	Requested recording	7578
1201	Seconds	4916
7500	To retrieve agent recordings please enter a valid supervisor extension	17636
7501	We received an invalid extension and password.	13148
7502	Please enter the password followed by the pound sign.	12142
7504	We received an invalid entry.	8364

/usr/add-on/centerpoint/util

Name	Description	Size (Bytes)
aaclean	Automatically removes stranded voice files	56828 (V8) 1537792 (V7) 1744528 (V6)

/etc/conf/init.d

Name	Description	Size (Bytes)
CS4I0pipeline	Inittab entry for Pipeline Server	60(V8) 79(V7) 79(V6)
CS4I1agtassta	Inittab entry for Pipeline Recorder	72 (V8) 92 (V7) 92 (V6)

Directory: /vs/bin/util/shutdown

Name	Description	Size (bytes)
plsvrstop	Files in this directory will be run as the CONVERSANT shuts down. This file will stop the plserver process.	746
plrecstop	Files in this directory will be run as the CONVERSANT shuts down.	764

Files associated with the installation and removal of the package can also be found under /var/sadm/pkg/pipeline and /var/sadm/pkg/callback.

Inittab File

The installations of Pipeline Server and Agent Assist add two files to the **/etc/conf/init.d** directory, CS4I0pipeline and CS4I1agtassta. The files will be placed in this directory automatically for V6 and V7 installations and will be placed there after running create_all for installations on the V8 platform. There is a slight difference between the files for the V6/V7 platform and the files for the V8 platform. The files added for V6/V7 will start the executables themselves while the files added for the V8 platform will start scripts which will set the LD_LIBRARY_PATH and then export it before running the executable.

The files which are placed under the /etc/conf/init.d directory will be included in the /etc/inittab file upon reboot of the CONVERSANT to ensure that the software will run continually. This way, if one of these processes were to be accidentally shutdown, the inittab entry would cause the process to be restarted. These entries will only be present following the reboot after install. Add these entries manually if they are not present. A fragment of a correctly configured inittab for a V6/V7 platform is shown below.

```
CVdk:4:respawn:/vs/bin/vrs/dskmgr < /dev/console > /dev/null 2>&1
CVbg:4:respawn:/vs/bin/vrs/bgm < /dev/console > /dev/null 2>&1
SPDM:4:off:/vs/bin/vrs/spDskMgr > /dev/null 2>&1
CVcm:4:off:/vs/bin/vrs/cronmon </dev/null >/dev/console 2>&1
CVlk:4:off:/vs/bin/vrs/lockmgr </dev/console >/dev/console 2>&1
PLS1:4:respawn:/usr/add-on/centerpoint/bin/plserver </dev/null >/dev/null 2>&1
PLS0:4:respawn:/usr/add-on/centerpoint/agentassist/bin/plrecord </dev/null >/dev/null 2>&1
mt07:234:respawn:/mtce/bin/dst_mon >/dev/null 2>&1
mt01:234:wait:/mtce/tools/mtce_dbfix >/dev/console 2>&1
mt02:234:respawn:/mtce/bin/logServer -d syslog </dev/null >/dev/null 2>&1
mts2:234:wait:sleep 3 </dev/null >/dev/null 2>&1
mt03:234:respawn:/mtce/bin/aom.p >/dev/console 2>&1
mts3:234:wait:sleep 3 </dev/null >/dev/null 2>&1
mt04:234:respawn:/mtce/bin/aom_call.p >/dev/console 2>&1
```

Services File

As with the Windows client, Agent Assist appends three entries to the **/etc/services** file. Without these entries, the TCP/IP connection will not function. If they are not present, add them manually. The lines that must be added are listed below.

gtiserv	39910/tcp	CenterPoint Solutions
gticlt	39911/udp	CenterPoint Solutions
gtisrvr	39912/udp	CenterPoint Solutions

Hosts File

An entry for the server must exist in the `/etc/hosts` file. However, Agent Assist will not add this entry during install. The entry must use the same machine name as is returned by the `"uname -n"` command. See below for an example of a correctly configured hosts file for a machine named "schubert."

```
#
# Internet host table
#
127.0.0.1      localhost

212.101.56.41 bach loghost
212.101.56.12 mozart
212.101.56.66 chopin
212.101.56.134 schubert
```

Backing Up, Restoring, and Migrating Data Files

This section describes the steps for backing up, restoring, and migrating database and voice files that reside on your CONVERSANT machine.

The backup and restore files are located in the `/usr/add-on/centerpoint/bin` directory.

Backing up Files

To run the backup procedure

- 1 Insert a tape into the tape drive.
- 2 Log on to the CONVERSANT as root.
- 3 From the root directory, type `/usr/add-on/centerpoint/bin/backup.ksh`

The following **Backup Menu** appears.

BACKUP MENU

- 1) DATABASE AND VOICE FILES ONLY
- 2) DATABASE, FULL APPLICATIONS AND VOICE FILES
- 3) QUIT

ENTER THE NUMBER OF THE OPTION YOU WANT OR 3 TO QUIT.

- 4 Type the number of the option you want.

You can backup both database and voice files at the same time, or the database, full application, and voice files at the same time.

For steps on the backup process, see the next sections.

Selecting Backup Option 1

To back up Database and Voice Files Only

From the Backup Menu, type **1**

Information similar to the following appears:

```
THE DATABASE IS BEING EXPORTED. PLEASE WAIT.
THIS WILL TAKE JUST A MINUTE

EXPORT: RELEASE 7.3.2.3.0 - PRODUCTION ON TUE NOV 7 10:07:57 2000

COPYRIGHT (C) ORACLE CORPORATION 1979, 1994. ALL RIGHTS RESERVED.

CONNECTED TO: ORACLE7 SERVER RELEASE 7.3.2.3.0 - PRODUCTION RELEASE
PL/SQL RELEASE 2.3.2.3.0 - PRODUCTION
EXPORT DONE IN US7ASCII CHARACTER SET

ABOUT TO EXPORT SPECIFIED USERS
ABOUT TO EXPORT PIPELINE'S OBJECTS
.EXPORTING SNAPSHOTS
.EXPORTING SNAPSHOT LOGS
.EXPORTING JOB QUEUES
.EXPORTING REFRESH GROUPS AND CHILDREN
.EXPORTING DATABASE LINKS
.EXPORTING SEQUENCE NUMBERS
.EXPORTING CLUSTER DEFINITIONS
.ABOUT TO EXPORT PIPELINE'S TABLES VIA CONVENTIONAL PATH
. EXPORTING TABLE    PL_AAADMIN          1 ROWS EXPORTED
. EXPORTING TABLE    PL_AGENTLIST        9 ROWS EXPORTED
. EXPORTING TABLE    PL_ANSWERS          0 ROWS EXPORTED
. EXPORTING TABLE    PL_CALLBACKS       11 ROWS EXPORTED
...
.EXPORTING STORED PROCEDURES
.EXPORTING REFERENTIAL INTEGRITY CONSTRAINTS
.EXPORTING TRIGGERS
.EXPORTING POSTABLES ACTIONS
EXPORT TERMINATED SUCCESSFULLY WITHOUT WARNINGS
```

After the databases are exported, the voice and database files are backed up to the tape.

The following message appears:

```
BACKING UP THE VOICE FILES...
PLEASE WAIT. THIS MAY TAKE A FEW MINUTES.
```

The backup process can take two minutes or longer.

When the processes are complete, the following message appears:

```
THE BACKUP OF THE DATABASE AND VOICE FILES IS COMPLETED.
```

The command prompt appears.

Selecting Backup Option 2

To perform a system backup

From the Backup Menu, type **2** to back up the Database, Full Applications, and Voice Files.

Information similar to the following displays:

```

THE DATABASE IS BEING EXPORTED. PLEASE WAIT.
THIS WILL TAKE JUST A MINUTE
EXPORT: RELEASE 7.3.2.3.0 - PRODUCTION ON TUE NOV 7 11:36:14 2000
COPYRIGHT (C) ORACLE CORPORATION 1979, 1994. ALL RIGHTS RESERVED.
CONNECTED TO: ORACLE7 SERVER RELEASE 7.3.2.3.0 - PRODUCTION RELEASE
PL/SQL RELEASE 2.3.2.3.0 - PRODUCTION
EXPORT DONE IN US7ASCII CHARACTER SET

ABOUT TO EXPORT SPECIFIED USERS
ABOUT TO EXPORT PIPELINE'S OBJECTS
.EXPORTING SNAPSHOTS
.EXPORTING SNAPSHOT LOGS
.EXPORTING JOB QUEUES
.EXPORTING REFRESH GROUPS AND CHILDREN
.EXPORTING DATABASE LINKS
.EXPORTING SEQUENCE NUMBERS
.EXPORTING CLUSTER DEFINITIONS
.ABOUT TO EXPORT PIPELINE'S TABLES VIA CONVENTIONAL PATH
. EXPORTING TABLE      PL_AAADMIN          1 ROWS EXPORTED
. EXPORTING TABLE      PL_AGENTLIST        9 ROWS EXPORTED
. EXPORTING TABLE      PL_ANSWERS          0 ROWS EXPORTED
. EXPORTING TABLE      PL_CALLBACKS        11 ROWS EXPORTED
...
.EXPORTING POSTABLES ACTIONS
EXPORT TERMINATED SUCCESSFULLY WITHOUT WARNINGS

ALL THE APPLICATION, DATABASE AND VOICE FILES ARE BEING BACKED UP TO TAPE.
PLEASE WAIT. THIS MAY TAKE A FEW MINUTES.
THE BACKUP PROCESS IS COMPLETE.

```

Restoring Files

The restore procedure copies the files from the backup tape to the hard drive of the CONVERSANT. Restoring completely removes the current database and imports the restored database from the tape. The database from the tape becomes your current database.

You determine which set of files are restored to the CONVERSANT's hard drive, based on your selection to restore the database and voice files only or to restore the database, full application, and voice files.

Note: Make sure you know what you have on your backup tape before you overwrite the current database.

To run the restore procedure

- 1 Insert the tape with the backup files into the tape drive.
- 2 Log on to the CONVERSANT as root.
- 3 From the root directory, type `/usr/add-on/centerpoint/bin/restore.ksh`

The following menu appears:

RESTORE MENU

- 1) DATABASE AND VOICE FILES ONLY**
- 2) DATABASE, FULL APPLICATIONS AND VOICE FILES**
- 3) QUIT**

ENTER THE NUMBER OF THE OPTION YOU WANT OR 3 TO QUIT:

- 4 Type the number of the option you want.

Selecting Restore Option 1

To restore the database and voice files only

- 1 From the Restore Menu, type **1** and the following message appears:

**VOICE FILES ARE BEING RESTORED FROM TAPE.
PLEASE WAIT. THIS MAY TAKE A FEW MINUTES.**

@@
@@
***** **ATTENTION !!!!!!!** *****
@@
@@

**THIS PROCESS WILL DELETE ALL THE TABLES INCLUDING ALL THE DATA
IN YOUR DATABASE!**

ARE YOU SURE YOU WANT TO CONTINUE? YES OR NO:

- 2 Choose from the following options:

- To restore, type **yes** or **y**.

The current database is deleted and system imports the database from the backup tape. This database becomes the current database.

Selecting Restore Option 2

To restore the database, full application, and voice files

- 1 From the Restore Menu, type 2.

Option 2 is used to restore a system backup only. The following message appears:

```
VOICE FILES ARE BEING RESTORED FROM TAPE.
PLEASE WAIT. THIS MAY TAKE A FEW MINUTES.

@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
***** ATTENTION !!!!!!! *****
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

THIS PROCESS WILL DELETE ALL THE TABLES INCLUDING ALL THE DATA
IN YOUR DATABASE!

ARE YOU SURE YOU WANT TO CONTINUE? YES OR NO:
```

- 2 Choose from the following options:

- To copy the application, database, and voice files to the hard drive in the proper directories, type **yes** or **y**.

The files are copied to the hard drive. A warning appears that states all the current tables will be deleted if you continue. Select **yes** and the database from the tape becomes the current database.

Information similar to the following displays:

```

IMPORT: RELEASE 7.3.2.3.0 - PRODUCTION ON TUE NOV 7 12:13:50 2000

COPYRIGHT (c) ORACLE CORPORATION 1979, 1994. ALL RIGHTS RESERVED.

CONNECTED TO: ORACLE7 SERVER RELEASE 7.3.2.3.0 - PRODUCTION RELEASE
PL/SQL RELEASE 2.3.2.3.0 - PRODUCTION

EXPORT FILE CREATED BY EXPORT:V07.03.02 VIA CONVENTIONAL PATH

IMP-00015: FOLLOWING STATEMENT FILED BECAUSE THE OBJECT ALREADY EXISTS:
"CREATE SEQUENCE "SEQ_PL_CALLBACKS" MINVALUE 1 MAXVALUE 999999999999999999
"999999999 INCREMENT BY 1 START WITH 10020 CACHE 20 NOORDER NOCYCLE"
IMP-00015: FOLLOWING STATEMENT FAILED BECAUSE THE OBJECT ALREADY EXISTS:
"CREATE SEQUENCE "SEQ_PL_QUESTION" MINVALUE 1 MAXVALUE 999999999999999999
"9999 INCREMENT BY 1 START WITH 41 CACHE 20 NOORDER NOCYCLE"
IMP-00015: FOLLOWING STATEMENT FAILED BECAUSE THE OBJECT ALREADY EXISTS:
"CREATE SEQUENCE "SEQ_PL_RECORDINGS" MINVALUE 1 MAXVALUE 999999999999999999
"99999999999 INCREMENT BY 1 START WITH 10020 CACHE 20 NOORDER NOCYCLE"
IMP-00015: FOLLOWING STATEMENT FAILED BECAUSE THE OBJECT ALREADY EXISTS:
"CREATE SEQUENCE "SEQ_PL_SURVEYRESULT" MINVALUE 1 MAXVALUE 999999999999999999
"99999999999 INCREMENT BY 1 START WITH 10040 CACHE 20 NOORDER NOCYCLE"

      . IMPORTING TABLE "PL_AAADMIN"           1 ROW IMPORTED
      . IMPORTING TABLE "PL_AGENTLIST"         9 ROWS IMPORTED
      . IMPORTING TABLE "PL_ANSWERS"           0 ROWS IMPORTED
      . IMPORTING TABLE "PL_CALLBACKS"         11 ROWS EXPORTED
      . IMPORTING TABLE "PL_CBADMIN"           1 ROW IMPORTED
      . IMPORTING TABLE "PL_CUSTOM"            0 ROWS IMPORTED
      . IMPORTING TABLE "PL_ESCALATIONS"       9 ROWS IMPORTED
      . IMPORTING TABLE "PL_HOLIDAYS"          4 ROWS IMPORTED
      . . .
      . IMPORTING TABLE "PL_RECORDINGS"        0 ROWS IMPORTED
IMPORT TERMINATED SUCCESSFULLY WITH WARNINGS.

THE DATABASE AND APPLICATION FILE PROCESS HAS BEEN COMPLETED.

```

- To stop the restoration process, type **no** or **n** and the following message appears:

```

THE DATABASE WAS NOT RESTORED!

THE PROCESS HAS ENDED.

```

The command prompt appears.

Migrating Data

This script removes the old license from the database and lets you enter a new license for the new CONVERSANT through Port Manager.

Use the backup and restore procedures to migrate data from an old CONVERSANT to a new CONVERSANT.

To migrate data from old CONVERSANT to new CONVERSANT

- 1 Update the NICE CenterPoint applications on the old CONVERSANT to the latest versions.
- 2 Back up the database and voice files on the old CONVERSANT to a tape.

- 3 Ensure the latest versions of the NICE CenterPoint applications are loaded on the new CONVERSANT.
- 4 On the new CONVERSANT, run the restore script and select to restore database and voice files only. See "**Restoring Files**" on page 1-27.
- 5 Migrate the data:
 - a Log on to the CONVERSANT as root.
 - b From the root directory, type `/usr/add-on/centerpoint/bin/migrate.ksh`

The following message appears:

```

@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@@@@@@@@@@@@@@@@@@@@@@@@
***** ATTENTION !!!!!!! *****
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@@@@@@@@@@@@@@@@@@@@@@@@

THIS PROCESS WILL DELETE YOUR LICENSE AND KEY FROM YOUR
DATABASE. YOU ONLY WANT TO DO THIS ON THE NEW CONVERSANT
WHERE YOU ARE MIGRATING YOUR DATA OVER TO.

ARE YOU SURE YOU WANT TO CONTINUE? YES OR NO:

```

- 6 Choose from the following options:
 - If you type **yes** or **y**, the following message appears:

```

YOUR DATABASE IS BEING UPDATED.
THIS MAY TAKE A MINUTE. PLEASE WAIT.

THE LICENSE AND KEY HAVE BEEN REMOVED.
BE SURE TO REQUEST A NEW LICENSE AND INPUT IT THROUGH PORT
MANAGER.

```

- If you type **no** or **n**, the following message appears:

```

THE LICENSE AND KEY WERE NOT REMOVED!

```

License Tool

A new tool has been included with the installation of Pipeline Server 2.9.2 that will query the current license and key and display what products it includes. To use the license tool, type the following at the command line:

```
/usr/add-on/centerpoint/bin/license_tool [host_name]
```

If a `host_name` is specified, it will be used in the decryption of the license in the `pl_sysadmin` table. If a host name is not specified, the tool will use the `uname` as a default and use that in the decryption of the `hostname`.

Server (CONVERSANT) Database Tables

The following database tables are created when the packages pipeline (Pipeline Server) and agtasstc (Agent Assist) are installed. The tables are owned by the user PIPELINE, a user created with the installation of the pipeline (Pipeline Server) package.

Note: In some cases, possible values are shown for a field. These values are not forced by database constraints; rather they are enforced by the application logic.

Tables Created with Package pipeline

Table pl_aaadmin

The pl_aaadmin table contains parameters specific to Agent Assist. At this time, it only contains the silence_trimming field which is currently not used.

Field	Variable Type	Values
silence_trimming	NUMBER(1)	Not currently used.

Table pl_agentlist

The pl_agentlist table contains all of the agent information for NICE CenterPoint Solutions products. The Administrator user is created upon installation and is used by all NICE CenterPoint Solutions products. In the case of Agent Assist, the Administrator user is the login to the Agent Assist Administrator client application. This application is used to enter agents, VDNs, supervisors, and holidays and can be used to listen to all recordings made. All agents, VDNs, and supervisors entered are stored in the pl_agentlist table as well – with the supervisor and isvdn flags indicating whether or not this is an entry for a supervisor or a VDN. Agent/VDN to supervisor relationships are stored in the pl_supervisors table. The Administrator user is also the login for Port Manager where system configuration information can be entered and viewed.

Field	Variable Type	Values
agent_id	VARCHAR2(16)	Default = adminuser Default = webcaller
name	VARCHAR2(50)	Default = Administrator Default = Web Caller
password	VARCHAR2(50)	Default = budNB8hHPJuzM Default = budNB8hHPJuzM
supervisor	VARCHAR2(1)	Default = Y Default = N (Possible Values) Y - yes, this person is also a supervisor N - no, this person is not a supervisor
isvdn	VARCHAR2(1)	Default = N Default = N (Possible Values) Y - yes, this is a VDN N - no, this is not a VDN

Table pl_holidays

The pl_holidays table is used by the Agent Assist application to identify holidays so that supervisors scheduling recordings can specify whether or not to exclude these days if they are scheduling recordings within a date range which includes a holiday. For example, if a supervisor schedules recordings for agents from December 29th through January 2nd and has designated January 1st as a holiday, the supervisor can choose to exclude January 1st as a possible day to make the recordings by choosing the option not to include holidays within the scheduling wizard. Each entry in the pl_holidays table includes a date – the actual date of the holiday specified by a month, day, and year – and a name which identifies the holiday. Holidays must be entered for each year – i.e., January 1 cannot be entered alone – the user must enter January 1, 2001; January 1, 2002; etc... No default data is included upon installation.

Field	Variable Type	Values
holiday	DATE NOT NULL	
name	VARCHAR2(30) NOT NULL	

Table pl_ports

The pl_ports table contains an entry for each port on the CONVERSANT and a status that describes its use within the NICE CenterPoint Solutions applications suite. For example, a status of 'P' means a port will be used to process Playback requests, allowing a supervisor to review recordings via the VUI. Callback Manager, Agent Assist, and Form Manager use this table. A number of the fields are used only if a customer is running Event Manager which is not part of the standard Agent Assist installation.

Field	Variable Type	Values
port_id	NUMBER(4) NOT NULL	
status	VARCHAR2(1)	(applicable values for CBM) F - may irForceInit() if necessary (available for stealing) I - Usable for Recordings P - Usable for Playback A - Available/unassigned L - locked out of service (DO NOT TAKE) 0 - out of service/Unavailable
port_extension	VARCHAR2(16)	
ucid	VARCHAR2(21)	Used by Event Manager.
last_ucid_update	DATE	Used by Event Manager.
app_data_1	VARCHAR2(50)	Used by Event Manager.
app_data_2	VARCHAR2(50)	Used by Event Manager.
app_data_3	VARCHAR2(50)	Used by Event Manager.

Table pl_starfields

The pl_starfields table stores the user-specified labels for the 10 collectible fields in the STAR client application. These are set via the Port Manager application (the “STAR Fields” tab in the Agent Assist folder within Port Manager). Once specified, they appear on the “Observance Notes” tab of the STAR application as labels in front of the text fields into which an agent can type collected. This table does not store the actual STAR data collected for each field; it stores the labels for the STAR fields themselves. The actual STAR data collected is stored for each STAR recording in the pl_recordings table.

Field	Variable Type	Values
star1	VARCHAR2(20)	Default = ' ' (a blank space)
star2	VARCHAR2(20)	Default = ' ' (a blank space)
star3	VARCHAR2(20)	Default = ' ' (a blank space)
star4	VARCHAR2(20)	Default = ' ' (a blank space)
star5	VARCHAR2(20)	Default = ' ' (a blank space)
star6	VARCHAR2(20)	Default = ' ' (a blank space)
star7	VARCHAR2(20)	Default = ' ' (a blank space)
star8	VARCHAR2(20)	Default = ' ' (a blank space)
star9	VARCHAR2(20)	Default = ' ' (a blank space)
star10	VARCHAR2(20)	Default = ' ' (a blank space)

Table pl_supervisors

The pl_supervisors table is used to store mappings between agents/VDNs and supervisors. The user specifies which agents or VDNs a supervisor can record by using the Agent Assist Administrator client application. If there is not a mapping between a supervisor and an agent, the supervisor should not be able to record the agent or listen to recordings made by that agent.

Field	Variable Type	Values
supervisor_id	VARCHAR2(16)	
agent_id	VARCHAR2(16)	

Table pl_sysadmin

The pl_sysadmin table contains information used by CallBack Manager, Agent Assist, and Form Manager for general processing. This table has one row of information including the valid license and key, the service observing feature access code (so_fac), and the converse on feature access code (converse_fac).

Field	Variable Type	Values
so_fac	VARCHAR2(6)	Default = *68
converse_fac	VARCHAR2(6)	Default = *99
key	VARCHAR2(8) NOT NULL	Default = 00000000
license	VARCHAR2(24) NOT NULL	Default = 000000000000000000000000
cca_level	CHAR(1)	Default = B
aa_fileaging	NUMBER	Default = 0
cbm_fileaging	NUMBER	Not used.
intertime	NUMBER	Default = 30
pretime	NUMBER	Default = 30
local_outdial	VARCHAR2(5)	Default = 9
ld_outdial	VARCHAR2(5)	Default = 9
areacode	VARCHAR2(6)	Default = NULL
timezone	CHAR(1)	Not used.
speak_ewt	CHAR(1)	Not used.
request_callback_time	CHAR(1)	Not used.
callpreviewtime	VARCHAR2(6)	Default = 30
base_dir	VARCHAR2(256)	/usr/add-on/centerpoint
recording_algo	NUMBER(1)	Default = 1 (Possible Values) 0 – ADPCM32 1 – CELP16

Table pl_sysparam

The pl_sysparam table is a holder for system variables. The name field describes the value; svalue holds a string value; and nvalue holds a numeric value. Type is reserved for future use. Two rows are included upon installation – the variable PL_SCHED which is used by Event Manager to determine whether it or plserver will schedule recordings made using AO and CEO. The second is PL_LANGUAGE which allows Agent Assist to point to Enhanced Basic Speech packages other than ebsUS.

Field	Variable Type	Values
name	VARCHAR2(50)	Default 1 = PL_SCHED Default 2 = PL_LANGUAGE
svalue	VARCHAR2(50)	Default 1 = 'Y'
nvalue	NUMBER(10,0)	Default 2 = 17
type	VARCHAR2(6)	

Tables Created with Package agtascstc

Table pl_recordings

The pl_recordings table contains information about each recording made. Each recording has a unique id, generated by the SEQ_PL_RECORDINGS sequence, which starts at 10000. Other information is stored as well, including the type, which describes from which application the request originated. Each recording has a status, which changes throughout the process of making a recording. The extension recorded is stored in extension and the extension of the agent or supervisor who requested the recording to be made is stored in requesting_agent. The dest field contains a pathname to the voice file with the recording. The fac field stores the service observing feature access code. Any observation notes are stored in the notes field and, if this recording was made via STAR, the data collected is stored in field1... field10.

Field	Variable Type	Values
id	NUMBER NOT NULL	generated from sequence SEQ_PL_RECORDINGS
orig_id	NUMBER	
type	CHAR(1) NOT NULL	(Possible Values) 0 – MCR 1 – Agent Now! 2 – S.T.A.R. 3 – Agent Observing 4 – CEO
status	CHAR(1) NOT NULL	(Possible Values) A – Actively recording B – Reorder Busy C – Completed (no error) D – Deleted E – Error (complete) H – Channel denied K – Completed/no recording made N – Cancelled by user R – Rescheduled (complete) S – Stopping T – Transferred to PC (deleted) W – Automatically removed by server
stat_chng	DATE NOT NULL	
extension	VARCHAR2(16) NOT NULL	
requesting_agent	VARCHAR2(16) NOT NULL	
actual_start	DATE	
actual_stop	DATE	
actual_length	NUMBER	
requested_start	DATE NOT NULL	
requested_length	NUMBER NOT NULL	
day_start	DATE	
day_stop	DATE	
dest_type	CHAR(1) NOT NULL	Default = F for file. Other values not currently available.
dest	VARCHAR2(256)	

fac	VARCHAR2(5)	
notes	VARCHAR2(1024)	
beep	CHAR(1) NOT NULL	Possible Values Y – play a tone before recording N – don't play a tone before recording
field1	VARCHAR2(200)	
field2	VARCHAR2(200)	
field3	VARCHAR2(200)	
field4	VARCHAR2(200)	
field5	VARCHAR2(200)	
field6	VARCHAR2(200)	
field7	VARCHAR2(200)	
field8	VARCHAR2(200)	
field9	VARCHAR2(200)	
field10	VARCHAR2(200)	
ucid	VARCHAR2(21)	Used by Event Manager.
call_id	VARCHAR2(21)	Not currently used.

The tables shown below are installed as part of the pipeline package, but are not used by Agent Assist. Do not delete these tables. They are used by other applications that also use the pipeline package.

pl_cbadmin
pl_escalations
pl_hours
pl_surveyport

Installing and Configuring Oracle SQL*Net (on the CONVERSANT)

As of Agent Assist 2.9.2, if ODBC is configured on the client, Agent Assist will use ODBC for some of the queries it makes in order to enhance performance. To determine whether or not ODBC is correctly configured, Agent Assist will run a test query using ODBC and if the results are returned without error, it will assume ODBC can be used. If the test is successful and Agent Assist is using ODBC, the title bar on the window will reflect it.

In order to use ODBC on the client, SQL*NET must be installed on the CONVERSANT. To install SQL*NET, do the following:

1. Logon to the CONVERSANT as "root"
2. If this is a CONVERSANT V6 or V7 platform, check to see if SQL*NET is already installed on the CONVERSANT by typing "pkginfo | grep ora7sql".

Note: ⓘ	<i>If the command returns: "intuity ora7sql INTUITY SQL*NET TCP/IP V1/VW for ORACLE 7.1.3", or a similar line, then SQL*Net is already installed and you can skip to step6. Otherwise, contact Lucent to obtain the SQL*Net tape.</i>
----------------	--

If this is a CONVERSANT V8 platform, Oracle may or may not be installed on the CONVERSANT. Check to see if Oracle is installed by typing "pkginfo | grep ora".

Note: ⓘ	<i>If the command returns: "intuity oraint ORACLE 8i RDBMS Integration Package", or a similar line, then Oracle is already installed and you can skip to step6. Otherwise, contact Lucent to obtain the Oracle.</i> <i>It is not necessary to check for the ora7sql package. SQL*NET is included in the Oracle 8i RDBMS Integration Package.</i>
----------------	---

3. Place the Oracle SQL*Net installation tape provided by Lucent in the CONVERSANT's tape drive
4. Type "pkgadd -d ctape1 ora7sql"
5. Press Enter at the prompt

Insert a cartridge into tape drive 1

TYPE GO WHEN READY OR Q TO QUIT: (DEFAULT: GO)

6. After the package has installed successfully, check to see if the listener.ora file has been configured. Type "cd /var/opt/oracle" on a V6 or V7 CONVERSANT or "cd /oracle/network/admin" on a V8 CONVERSANT to change to the appropriate directory containing the listener.ora file.
7. Type "ls" at the command line. If the file listener.ora is not returned when "ls" is typed, it will need to be configured. To do so continue with step 8; otherwise, if the file listener.ora is present, skip to step 11.
8. Type "grep HOST listener.tmpl"
9. Write down the name of the host from the results. In this example, the host's name is cvis10
(HOST=cvis10)
10. Type "sed s/HOSTNAME/SERVER/< listener.tmpl > listener.ora"

(you will be substituting the host name written down in the previous step for the word HOSTNAME and the name of the CONVERSANT for the word SERVER)

Example:

If the CONVERSANT name is dw98f, the command would be:

```
sed s/cvis10/dw98f/ < listener.tmpl > listener.ora
```

11. Verify whether or not the listener is running by typing "ps -eaf | grep tns"
12. If the listener is running you will see something similar to:
daemon 5831 1 0 14:01:01 ? 0:00 /oracle/bin/tnslsnr LISTENER -inherit
13. If the listener is not running, type the following at the command prompt:
/oracle/bin/lsnrctl start
You should see output indicating that the listener started successfully.

CONVERSANT Components

Playback Ports

These are ports on the CONVERSANT that can be accessed by a caller to listen to recordings and associated recording information. These ports are specifically assigned to Agent Assist through Port Manager. This functionality allows a supervisor to review recordings via a Voice User Interface (VUI) by calling into the port if they cannot access them via a PC running the client application.

Recording ports

These are ports on the CONVERSANT that Agent Assist uses to initiate recordings. These ports are specifically assigned to Agent Assist through Port Manager. When a recording is initiated, it uses the first available recording port. If all ports are in use the requested recording may bump a recording currently being made if it has a higher priority.

plrecord

This is the central process to Agent Assist. It runs continuously and makes recordings when requested. It is also used when supervisors access recordings via the Playback VUI functionality.

plserver

This is also a process that runs continuously on the CONVERSANT. It acts as the referee in Agent Assist. The plserver process receives client messages and processes them. In addition, it polls the Oracle database periodically and informs plrecord when it is time to start a scheduled recording (if Event Manager is not being used). It is added during part of the Pipeline Server package installation. The plserver process is also used in CallBack Manager and Form Manager.

Oracle Database

The database sits on the CONVERSANT and holds all the pertinent caller information. Oracle must be on the CONVERSANT. It is not part of the Agent Assist installation.

SQL*Net

SQL*NET may be used for some queries if it has been installed and is properly configured. If it is not installed and properly configured, it will not be used and all messages will go through the Pipeline OCX. For large amounts of data, performance may be enhanced by using SQL*NET. Even if SQL*NET is installed, only specific queries will be sent using it – the majority of queries will still go through the Pipeline OCX.

ebsUS - female

This is the voice package installed on the CONVERSANT that AA uses for voice prompts. This package must be installed for AA to work properly. It is not part of the AA installation.

Client Software

If the customer has any other NICE CenterPoint Solutions products installed (CallBack Manager or Form Manager); they will need to be upgraded. Versions of NICE CenterPoint Solutions products that are compatible with Agent Assist 2.9.2 are as follows:

CallBack Manager 1.3.2
Form Manager 1.3.2

Client Installation/Upgrade

A user with administrative privileges must do installations on the client; otherwise, entries in the client “services” file will not be made. To install the Client application, obtain the installation CD and insert it into the CD drive. Go to the following directory on the CD:

NICE CenterPoint Solutions Products/AgentAssist

and double-click on AAsetup.

Follow the prompts displayed by the installation wizard.

Directories

The following directories are either created during the install process or have additional files placed under them.

Note: *The product installation allows the user to designate the directory into which it will be installed. The directories shown here are the default directories and assumes the user has not changed this upon install.*

C:\Program Files\CenterPoint\AgentAssist
C:\Program Files\CenterPoint\Port Manager
C:\Program Files\CenterPoint\lvp
C:\WINNT\System32 (C:\Windows\System)
C:\WINNT\Profiles\[user]\Start Menu\Programs\CenterPoint Solutions(C:\Windows\ Start Menu...)

Files Installed

The following files are added during the installation process:

C:\Program Files\CenterPoint\AgentAssist:

Name	Description	Version or Size
AgentAssist – Administrator.exe	Review recordings. Modify agents, holidays, & agent to supervisor assignments.	2.09.0001
AgentAssist - CEO.exe	Scheduled recording of VDN's.	2.09.0001
AgentAssist - STAR.exe	Agent initiated on demand recording.	2.09.0001
AgentAssist - MCR.exe	Priority agent initiated on demand recording.	2.09.0001
AgentAssist – AgentNow!.exe	Supervisor initiated on demand recording.	2.09.0001
AgentAssist - AO.exe	Supervisor initiated scheduled recording.	2.09.0001
AgentAssist – Retriever.exe	Review recordings.	2.09.0001
		2.09.0001
Filecopy.avi	Windows file copy animation	10 KB
About.wav	NICE CenterPoint Solutions sound file	48 KB

C:\Program Files \CenterPoint\Port Manager

Name	Description	Version or Size
Port Manager.exe	CONVERSANT administration, AA licensing	2.09.0001

C:\Program Files\CenterPoint\lvp:

Name	Description	Version or Size
Lvp16.exe	CELP player executable	1.1.1
Lvp.hlp	Help file for CELP player executable	77 KB
Miracle.lvp	Sample recording	20 KB
Record.wav	Sample recording	7 KB
Xcode416.dll	CELP player library	101 KB

Other Files

Name	Description	Version
comcat.dll	Microsoft Component Category Manager Library	4.71
asycfilt.dll	Microsoft OLE 2.40 for Windows NT(TM) and Windows 95(TM) Operating Systems	2.40.4275
oleaut32.dll	Microsoft OLE 2.40 for Windows NT(TM) and Windows 95(TM) Operating Systems	2.40.4275
olepro32.dll		5.0.4275
stdole2.tlb	Microsoft OLE 2.40 for Windows NT(TM) and Windows 95(TM) Operating Systems	2.40.4275
sysinfo.ocx	SysInfo	6.00.8169
Comctl32.ocx	Windows Common Controls ActiveX Control DLL	6.00.8022
Comdlg32.ocx	CMDialog ActiveX Control DLL	6.00.8418
CONVER~1.OCX	Voice File Converter Control	5.01.0001
Mscal.ocx	Microsoft Calendar Control	8.0.0.5007
Mschart.ocx	Microsoft Chart ActiveX Control	5.00.3714
Pipeline.Ocx	Conversant® Pipeline Control	2.5.0553
tdbg5.ocx	True DBGrid Data Bound Grid	5.0.0151
xarray32.ocx	XArray ActiveX Array Object	1.0.003
msvcrt.dll	Microsoft (R) C Runtime Library	6.00.8397.0
xcode432.dll	Lucent Intuity Transcoding Library (32 bit)	4, 1, 1, 22
Comcat.dll	Microsoft Component Category Manager Library	4.71
DAO350.dll	Microsoft DAO 3.51 Object Library	3.51.1608.0
Msvbvm50.dll	Visual Basic Virtual Machine	05.02.8244 (SP2)
Msvbvm60.dll	Visual Basic Virtual Machine	6.00.8495
olepro32.dll		5.0.4275
SSTree.ocx	SSTree ActiveX Control	1.01.0011
VSocx32.OCX	vsOcx ActiveX Controls	5.0.550
Asycfilt.dll	Microsoft OLE 2.40 for Windows NT(TM) and Windows 95(TM) Operating Systems	2.40.4275
Implode.dll	Implode Application	1, 0, 0, 1
msrepl35.dll	Microsoft Replication Library	3.51.2010.0
Stdole2.tlb	Microsoft OLE 2.30 for Windows NT(TM) and Windows 95(TM) Operating Systems	2.40.4268
Vb5db.dll	Visual Basic ICursor Interface Library	6.00.8169
msvcirt.dll	Microsoft (R) C++ Runtime Library	6.00.8168.0
Oledlg.dll	Microsoft Windows(TM) OLE 2.0 User Interface Support	1.0
Vb5.olb		NA
Vba5.dll	Visual Basic for Applications Development Environment	5.0.7911
mfc40.dll	MFC DLL Shared Library - Retail Version	4.1.6038
msexcl35.dll	Microsoft Jet Excel Isam	3.51.0623.2
msjet35.dll	Microsoft Jet Engine Library	3.51.2026.0
msltus35.dll	Microsoft Jet Lotus 1-2-3 Isam	3.51.0623.0
mispdox35.dll	Microsoft Jet Paradox Isam	3.51.0623.0
msrd2x35.dll	Microsoft (R) Red ISAM	3.51.0623.0
mstext35.dll	Microsoft Jet Text Isam	3.51.0623.0
msxbse35.dll	Microsoft Jet xBase Isam	3.51.0623.0

Name	Description	Version
oleaut32.dll	Microsoft OLE 2.20 for Windows NT(TM) and Windows 95(TM) Operating Systems	2.20.4118
convdsn.exe	Microsoft ODBC DSN Conversion Sample	03.00.2301
ctl3d32.dll	Ctl3D 3D Windows Controls	2.29.000
dbnmptw.dll	Named Pipes Net DLL for SQL Clients	1996.07.15
drvssvr.hlp	Help File	NA
drvvp.cnt	Help Contents File	NA
drvvp.hlp	Help File	NA
ds16gt.dll	Microsoft ODBC Driver Setup Generic Thunk	03.00.2301
ds32gt.dll	Microsoft ODBC Driver Setup Generic Thunk	03.00.2301
Expsrv.dll	Visual Basic for Applications Runtime - Expression Service	6.0.8167
instcat.sql	Sql file	NA
jetdef35.hlp	Help File	NA
jeterr35.cnt	Help Contents File	NA
jeterr35.hlp	Help File	NA
jetsql35.cnt	Help Contents File	NA
jetsql35.hlp	Help File	NA
mscpxl32.dll	Microsoft ODBC Code Page Translator	2.65.0201
msexch35.dll	Microsoft Jet Exchange Isam	3.51.0623.0
msjint35.dll	Microsoft Jet Database Engine International DLL	3.51.0623.0
msjter35.dll	Microsoft Jet Database Engine Error DLL	3.51.0623.0
odbc16gt.dll	Microsoft ODBC Driver Generic Thunk	03.00.2301
odbc32.dll	Microsoft ODBC Driver Manager	03.00.2301
odbc32gt.dll	Microsoft ODBC Driver Generic Thunk	03.00.2301
odbcad32.exe	Microsoft ODBC Administrator	03.00.2301
odbccp32.cpl	Microsoft ODBC Control Panel	03.00.2301
odbccr32.dll	Microsoft ODBC Cursor Library	03.00.2301
odbcinst.cnt	Help Contents File	NA
odbcinst.hlp	Help File	NA
odbcjet.cnt	Help Contents File	NA
odbcjet.hlp	Help File	NA
odbcji32.dll	Microsoft ODBC Desktop Driver Pack 3.5	3.50.3428.00
odbcjt32.dll	Microsoft ODBC Desktop Driver Pack 3.5	3.50.3428.00
odbcjtnw.cnt	Help Contents File	NA
odbcjtnw.hlp	Help File	NA
odbctl32.dll	ODBC Helper Function DLL	3.50.3428.00
odbctrac.dll	Microsoft ODBC Driver Manager	03.00.2301
oddbse32.dll	ODBC (3.0) driver for DBase	3.50.3428.00
odexl32.dll	ODBC (3.0) driver for Excel	3.50.3428.00
odfox32.dll	ODBC (3.0) driver for FoxPro	3.50.3428.00
odpdx32.dll	ODBC (3.0) driver for Paradox	3.50.3428.00
odtext32.dll	ODBC (3.0) driver for text files	3.50.3428.00

Name	Description	Version
sqlsrv32.dll	Microsoft SQL Server ODBC Driver	2.65.0240
vbajet32.dll	Visual Basic for Applications Development Environment - Expression Service Loader	6.1.8268
vbar332.dll	Visual Basic for Applications Runtime - Expression Service	3.0.6908
vfpodbc.dll	Microsoft Visual Foxpro ODBC Driver	5.0.0.348
SysTray.ocx	System Tray Icon Control	5.0
Crypter.ocx	Orwell© Encryption Control	2.1.0110
comct232.ocx	Microsoft Common Controls 2 ActiveX Control DLL	6.00.8022

Documentation Files

File Name	Description	Version
AA_Product_Overview.pdf	AA Overview	NA
AgentAssist_Training.pdf	AA Training Document	NA
AgentAssist_User_Guide.pdf	AA User's Guide	NA

Agent Assist Directory

The default location of the Agent Assist files is **c:\Program Files\CenterPoint\AgentAssist**. However, the installation program does allow the user to specify a different location.

Agent Assist Program Group

The Agent Assist program group can be accessed via the Start Button. Some users may prefer to access Agent Assist directly from a shortcut on the desktop. Refer to the Windows help file for instructions on setting up shortcuts.

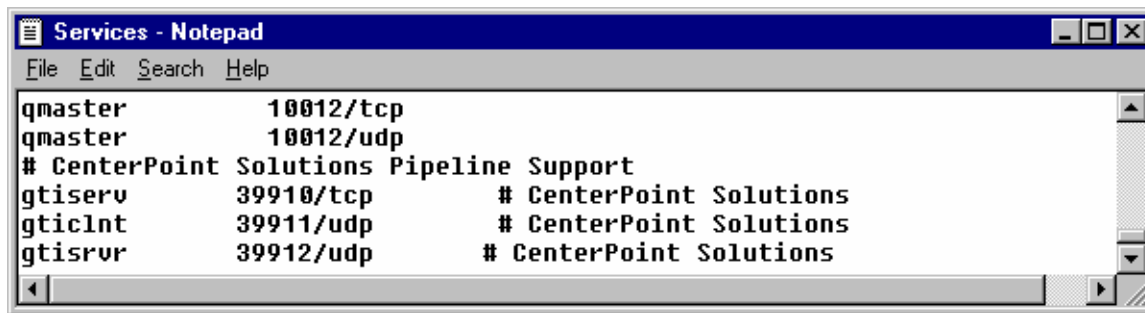
LVP Directory

Agent Assist will install the CELP player on the client machine. This allows the user to bring back recordings made with the CELP algorithm on the CONVERSANT as CELP files as opposed to being converted to WAV files. To enable this feature the user should select the 'Use CELP player to play CELP voice files' menu option.

Services File

Agent Assist appends three entries (gtiserv, gticlient, gtisrvr) to the system's services file. These additions are necessary in order for the TCP/IP connection to function properly. On occasion, the installation routine may not add the required entries. This problem generally occurs when the user does not have write privileges for the file. If the entries do not appear in the file after installation, manually add the lines using a text editor. The picture below shows a correctly configured services file. On a Windows NT machine, the file pathname is:

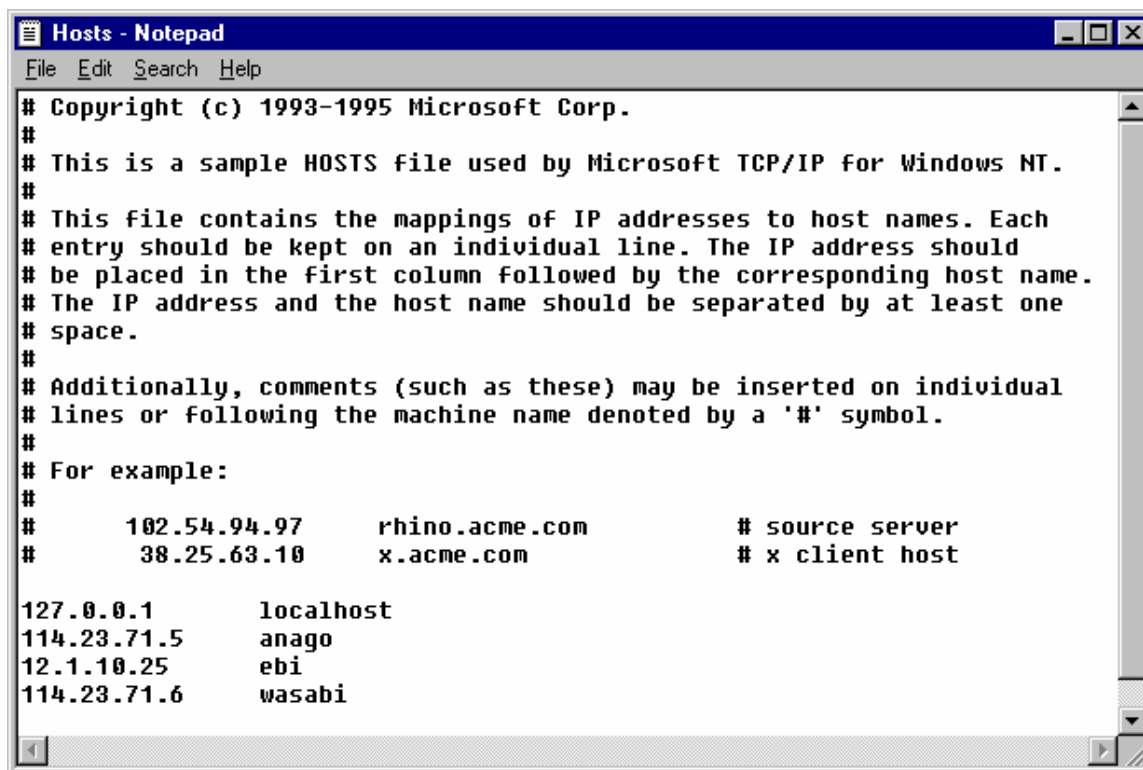
c:\winnt\system32\drivers\etc\services or c:\windows\services on a Windows 95 machine.



Hosts File

If the server is not set up in the customer's DNS (Domain Name Service) for the network, the client PC's host file must contain a reference to the server. An example of a correctly configured hosts file for a server named "wasabi" appears below. Notice that the entry is comprised of the server's IP address followed by the name of the server. On a Windows NT machine, the pathname of the hosts file is generally:

c:\winnt\system32\drivers\etc\hosts or c:\windows on a Windows 95 or Windows 98 machine.



```
# Copyright (c) 1993-1995 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows NT.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com           # source server
#       38.25.63.10       x.acme.com               # x client host

127.0.0.1       localhost
114.23.71.5     anago
12.1.10.25      ebi
114.23.71.6     wasabi
```

Installing and Configuring Oracle SQL*Net (on the client)

Agent Assist will use SQL*Net on both the client and the CONVERSANT to establish the ODBC connection if it is available. To install the Oracle SQL*Net Client with ODBC drivers, place the compact disk containing the NICE CenterPoint Solutions client applications in the CD-ROM drive. Using Windows Explorer, go to one of the following directories:

- For Windows 95 or 98
SQLNET_Oracle/Win95/Install
- For Windows NT or Windows 2000
SQLNET_Oracle/NT_x86/Install

Running Setup

1. From the directory, double click on the Setup.exe file and follow the prompts to the “Software Asset Manager” window.
2. At the “Software Asset Manager” window, there is a list of installation options (not necessarily in the order shown below):
 - Oracle Installer 3.1.3.1.2
 - Oracle7 32 bit ODBC Driver (Production) 2.0.3.1.1
 - SQL*Net Client 2.3.2.1.1
 - SQL*Net Easy Configuration 2.3.0.0.2
 - Required Support files 7.3.2.1.0
 - SQL*Net Protocol Adapters

It is necessary to install the first 5 options (“SQL*Net Protocol Adapters” does not need to be installed). It is recommended that they be installed in the order shown above.

When installing the “SQL*Net Easy Configuration 2.3.0.0.2” option, the installer will be prompted with the “SQL*Net Easy Configuration” window. With the option button for “Add Database Alias” selected, press the OK button. This will display the “Choose Database Alias” window. In the “Database Alias” text box, enter the name of the CONVERSANT and press the OK button. This will display the “Choose TCP/IP Host Name and Database Instance” window. In the “TCP/IP Host Name” text box, enter the name of the CONVERSANT. In the “Database Instance” text box enter the capitalized letter “A”, and press the OK button. The “Confirm Adding Database Alias” window displays. Press the “Yes” button to confirm the addition of the database alias. The “Add Alias” window displays again. Press the “Cancel” button to exit.

3. From the “Software Asset Manager” window, press the “Exit” button, which will display the “Notification” window. Press the “OK” button to exit

Modify the “Hosts” file

1. Locate the file called “Hosts” (no extension). This file will be in the operating system’s system directory under the drivers/etc directory. The following examples represent the location of the Hosts file for Windows NT and Windows 95/98 respectively:

C:\WINNT\System32\drivers\etc

C:\Windows\System\drivers\etc

2. Open the Hosts file using a text editor and add an entry to the bottom of the list. This entry will consist of the IP address of the CONVERSANT followed by a space and then the CONVERSANT name.

123.123.123.123 ConversantName

3. Save the changes to the file and exit the text editor.

Note: If no Hosts file exists, there is usually a "Hosts.sam" file. If this is the case, open the Hosts.sam file using a text editor, make the IP Address/CONVERSANT Name addition to the bottom of the list and then do a File/Save As and rename the file to "Hosts" (with no extension) to the same directory.

Create an ODBC Data Source Name (DSN) for the CONVERSANT server

1. One last step needs to be done before testing the ODBC conduit to the database. This step is to create an ODBC Data Source Name. Opening the ODBC Administrator and creating a new DSN for the CONVERSANT database can do this.
2. The ODBC Administrator can be accessed in one of two ways. The user can press the Windows Start button, select the Settings\Control Panel option and then select the "ODBC Data Sources" selection from the Control Panel. The second way to access the ODBC Administrator is to press the Windows Start button, select the Programs option and then select the "Oracle for Windows x" folder (x represents the operating system used on your computer). Select the option named "32-bit Administrator" within this folder.
3. Once the ODBC Administrator is displayed, select the "System DSN" tab and then press the "Add..." button. This will display the "Create New Data Source" window. From the "Select a driver for which you want to set up a data source" list box, select the "Oracle73" driver and then press the "Finish" button. The "Oracle7 ODBC Setup" window will display. At the window, enter the name of the CONVERSANT in the "Data Source Name" and "Description" text boxes and enter the <name of the CONVERSANT>.world in the "SQL*Net Connect String" text box.

Example - "Oracle7 ODBC Setup" with the name of the CONVERSANT being Conv1:

<u>Text Box</u>	<u>Entry</u>	<u>Example</u>
Data Source Name	<CONVERSANT name>	Conv1
Description	<CONVERSANT name>	Conv1
SQL*Net Connect String	<CONVERSANT name>.world	Conv1.world

4. Press the OK button. This will bring you back to the "ODBC Data Source Administrator" window with your new DSN included in the list of DSNs. Press the "OK" button to close the "ODBC Administrator".

Test the ODBC connection to the CONVERSANT

1. The last step in installing the Oracle SQL*Net software and drivers is to test the setup for database access. This is accomplished by pressing the Windows Start button, selecting the Programs option and then selecting the "Oracle for Windows x" folder (x represents the operating system used on your computer). Select the option named "32-bit ODBC Test". This operation displays the "Oracle ODBC 32-bit Test" application.

2. Press the "Connect" button. This displays the "Select Data Source" window. Select the "Machine Data Source" tab and from the list, select the DSN just created (the one named after your CONVERSANT) and press the "OK" button.
3. This will display a "Logon to Oracle" window. In this window enter "PIPELINE" in the "User Name" text box and "LOCKDOWN" in the "PASSWORD" text box and then press the "OK" button. If everything is set up correctly, you should not receive any error messages and the "Oracle ODBC 32-bit Test" window should receive focus.
4. Using your mouse click the unlabeled text box below the set of buttons. In the text box, enter the following SQL statement: "select * from pl_ports" and press the "Execute..." button. If the configuration and setup steps above were created correctly, the results of the query will be displayed in the lower window (Query1). This indicates that ODBC and SQL*Net layers of the database access are setup correctly and returning data. (The above SQL statement runs against a table created when our products have been installed on the CONVERSANT prior to installing the client portions of the software. If the client portions are installed before the CONVERSANT software, this SQL statement will not find the table pl_ports due to the fact that it has not been installed yet). If problems exist regarding the setup and configuration of the DSN and or SQL*Net, an error message will be received.

Switch (DEFINITY) Settings

Verify that the recorded extension is service observable

In order to use Agent Assist, extensions for which recordings will be made must be service observable. To verify that they are, do the following:

1. Login to the switch
2. Enter "disp stat XXX" where XXX is the extension being recorded.
3. Note the COR listed in the station display.
4. Press cancel to return to the command line.
5. Enter "disp cor XXX" where XXX is the COR noted earlier.
6. Verify that setting "Can be service observed?" is set to yes. Otherwise, work with the switch administrator to change the extension's COR.

Verify that the server's ports can service observe

In order to use Agent Assist, extensions of the ports that will be used to make recordings must be service observers. To verify that they are, do the following:

1. Login to the switch
2. Enter "disp stat XXX" where XXX is the extension of the server port used to make recordings.
3. Note the COR listed in the station display.
4. Press cancel to return to the command line.
5. Enter "disp cor XXX" where XXX is the COR noted earlier.
6. Verify that COS setting "Can be a service observer?" is set to yes. Otherwise, work with the switch administrator to change the extension's COR.
7. Repeat for each server port used to make Agent Assist recordings.

Service Observing Feature Access Code

In order to be able to make recordings via Agent Assist, the Service Observing Feature Access Code entered into Port Manager must be the same as the Service Observing Feature Access Code on the DEFINITY. To check the value of the Service Observing Feature Access Code on the DEFINITY, do the following:

To check the current setting on the DEFINITY:

1. Type 'disp system-parameter features'
2. Page down until you see Service Observing Listen Only Access Code.

Helpful Support Procedures

Server (CONVERSANT) Procedures

Verifying that Enhanced Basic Speech is installed

1. Login to the server as root.
2. Enter "pkginfo | grep ebsUS".
3. If the package is installed, the following line will appear in the result set:

```
intuity    ebsUS      Enhanced Basic Speech - US_English - Female
```

4. Otherwise, contact the Lucent AE to purchase the package.

Restarting the plrecord process

1. Login to the server as root.
2. Enter "ps -eaf | grep plrecord".
3. If a result is returned, write down the PID, it is the second field in the result. The PID is shown in bold below:

```
root  7117    1 11 15:41:30 pts/4    0:00 /usr/add-on/centerpoint/agentassist/bin/plrecord
```

Otherwise, plrecord is not running. Skip to step five.

4. Enter "kill **PID**", substituting the number written down in step 3 for **PID**. For the example above, entering "kill 7117" would stop the recorder.
5. Enter "cd /usr/add-on/centerpoint/agentassist/bin".
6. Enter "plrecstart".

Restarting the plserver process

1. Login to the server as root.
2. Enter "ps -eaf | grep plserver".
3. If a result is returned, write down the PID, it is the second field in the result. The PID is shown in bold below:

```
root  7116    1 11 15:41:30 pts/4    0:00 /usr/add-on/centerpoint/bin/plserver
```

Otherwise, plserver is not running. Skip to step five.

4. Enter "kill **PID**", substituting the number written down in step 3 for **PID**. For the example above, entering "kill 7116" would stop the server.
5. Enter "cd /usr/add-on/centerpoint/bin".
6. Enter "plsvrstart".

Finding the server's network name

1. Login to the server as root.
2. Enter "uname -n". Write down the result.
3. Enter "grep XXX /etc/hosts" where XXX is the server name returned by the uname command. If no match is returned, the server name will need to be added to the hosts file.

Checking the Playback Service state

1. Login to the server as root.
2. Enter "shmview -sysmon | more".
3. The voice service assigned to the port appears in the third column of the display. Use the space bar to page down through the display until an entry for the PipelineRcd voice service is found. If the PipelineRcd service does not appear in the display, then it is probably not assigned to a port.
4. Verify that port status (shown in the fourth column of the display) is "on hook". If the port is in another status, write it down for future reference.

Checking for other services on a port

1. Login to the server as root.
2. Enter "disp chan #", substituting the port id for the playback service for #.
3. The command should return a display similar to the one below. An entry other than "" in the SERVICE-NAME column indicates that another service is assigned to the channel.

CHN	CD	PT	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
24	1.0	Inserv	May 04 16:12:29	GT_REC_PRMT	-	2	talk	IVC6	

4. If a service is assigned to the port, talk to the customer to determine its function. Services that place or answer calls will interfere with Agent Assist. If possible, remove services which interfere with Agent Assist from the port using the following command:

```
delete service GT_REC_PRMT startup GT_REC_PRMT from chan 24
```

Substitute the name of the actual service in for GT_REC_PRMT and the number of the actual port in for 24. It is also possible to remove the service using `cvis_menu`. **Before removing the service be certain to obtain the permission of the customer.**

Verify the Playback Service extension

1. Remove the playback service from the extension in question with Port Manager.
2. Login to the server as root.
3. Use `cvis_menu` to assign a service that will answer incoming calls (ex. chantst) to the port in question. If necessary, consult Lucent technical support for assistance.
4. Enter "disp chan all | more". Pressing the space bar will page through the results. Make certain that only one channel has the test service assigned.
5. Dial the extension believed to be assigned to the port. If the service does not answer, it is likely that the extension is incorrect, as is the case if the line is answered by an unexpected service. Work with the switch administrator to find the correct extension. If the test service answers the line, the extension is correct.
6. Use `cvis_menu` to remove the test service from the port.
7. Assign the playback service to the port using Port Manager.

Determining the Amount of Space Available on the Disk Partition

1. Login to the server as root.
2. Enter "df -k".
3. Scan through the first column of the results for the name of the filesystem in question.

filesystem	kbytes	used	avail	capacity	mounted on
/dev/root	732160	681507	50653	93%	/
/proc	0	0	0	0%	/proc
/dev/fd	0	0	0	0%	/dev/fd
/dev/vol/standvol	15360	4336	11024	28%	/stand
/dev/vol/mtce	20480	6654	13826	32%	/mtce
/dev/vol/vs	204800	91561	113239	45%	/vs
/dev/vol/tmp	20480	1706	18774	8%	/tmp
/dev/vol/voice1	613376	342472	270904	56%	/voice1
/dev/vol/oracle713	400000	303070	96930	76%	/oracle
/dev/vol/home	250000	154148	95852	62%	/home

4. The percentage listed in the capacity column indicates the amount of space used on the partition. The avail column displays the amount of space available. In the sample results shown above, the partition "/dev/voice1" is 56% full with 270MB free.

Agent Assist Debugging Output

For complex Agent Assist issues that do not fit any known pattern, it may be useful to run the plserver or plrecord processes in debug mode. The debug output provides comprehensive feedback on the progress of each stage of the recording.

How to Start a Debug Session

1. Type "ps -eaf | grep plrecord"
2. Press enter.
3. Note the PID number listed in column two. If no result is returned, then process is not running. Start the process by entering :

"/usr/add-on/centerpoint/formmanager/bin/plrecord -d &" on a CONVERSANT. Otherwise, continue on to step four.
4. Type "kill -USR2 [PID]", replacing [PID] with the number noted above.
5. Press enter.

How to Review Debug Output

Debug output is written to a log file. The log file can be found in the "/usr/add-on/centerpoint/agentassist/log" directory. To monitor the log in realtime use the command "tail -f plrecord.log". Otherwise the log can be viewed and edited like any other UNIX text file (ex. "more plrecord.log").

How to Stop a Debug Session

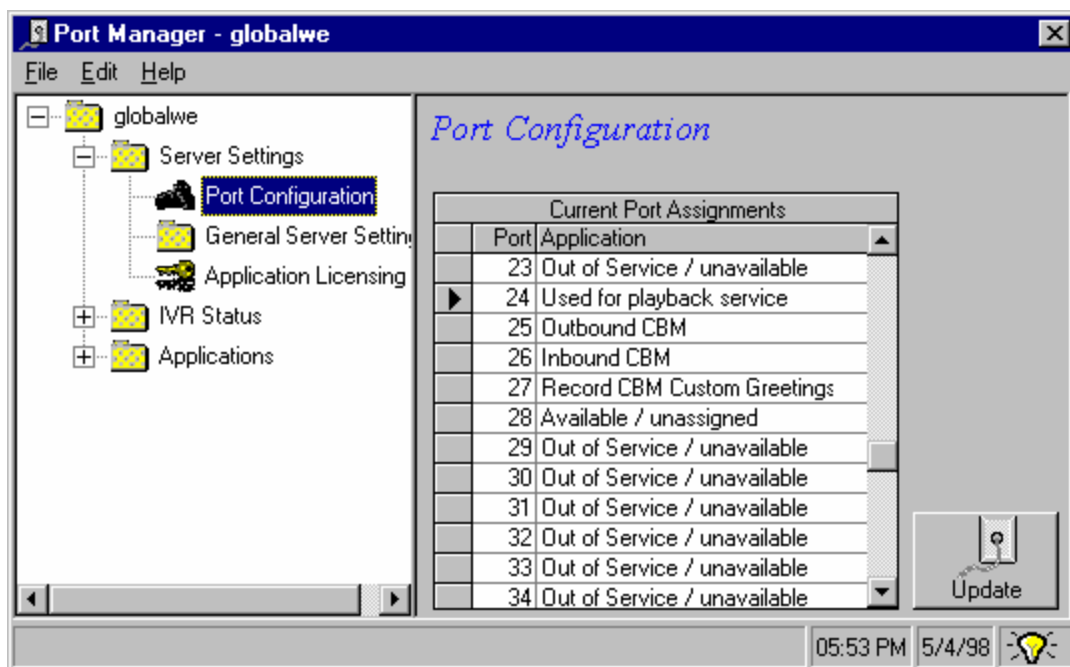
1. Type "ps -eaf | grep plrecord"
2. Press enter.
3. Note the PID number listed in column two.
4. Type "kill -9 [PID]", replacing [PID] with the number noted above.
5. Press Enter.

The plrecord process should restart automatically. If not, start the process by entering "/usr/add-on/centerpoint/agentassist/bin/plrecstart".

Client Procedures

Verify the Playback Service port assignment

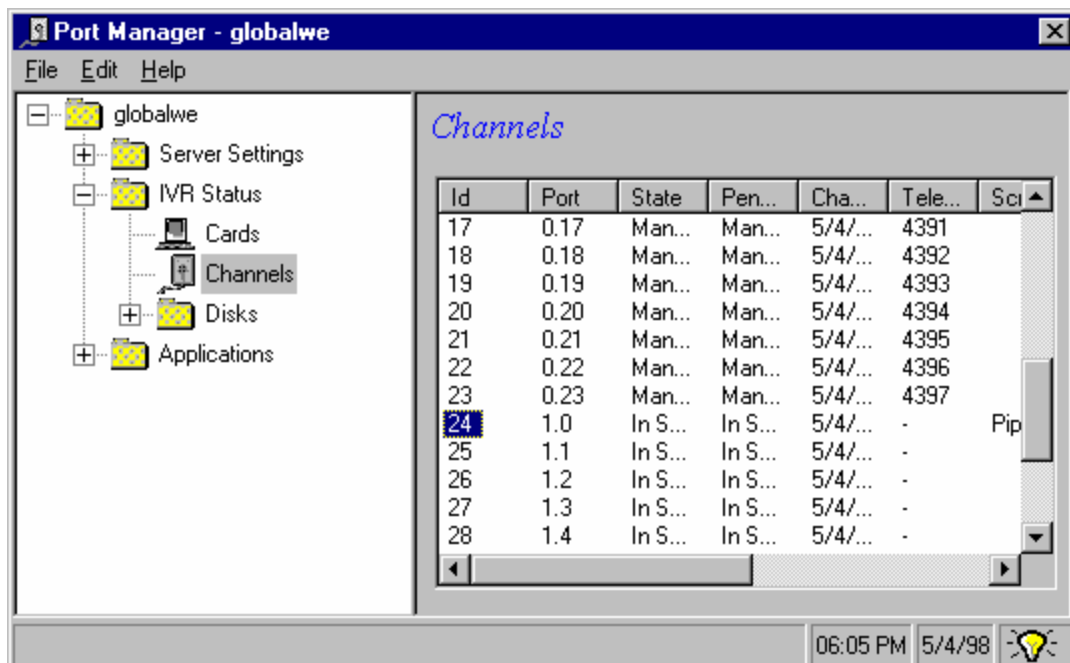
1. On the Microsoft Windows PC, start Port Manager and connect to the server.
2. In the port configuration display, make certain that at least one port is assigned as "Used for playback service". Make a note of the port id.



3. If no port is set to "Used for playback service," work with the customer to choose and setup a playback port.

Find the Playback Service extension

1. On the Microsoft Windows PC, start Port Manager and connect to the server.
2. Open the Channels display and scroll down until the port id of the playback service is found. The dial-in extension should be listed in the Telephone column. If the extension is not listed in the Telephone column (as is the case for some of the channels in the example shown below) it will be necessary to work with the switch administrator to determine which extension is associated with the server port in question. Also, keep in mind that even if an extension is listed for the port in the Telephone column it may be out-of-date or inaccurate.



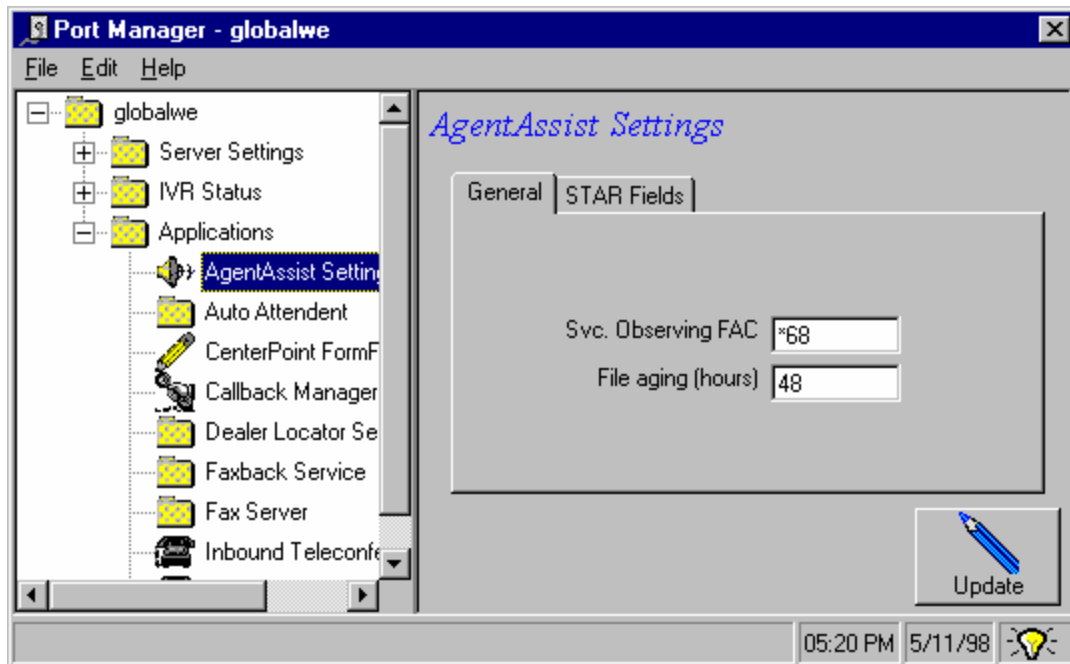
Changing the CONVERSANT Recording Algorithm

1. On the Microsoft Windows PC, start Port Manager and connect to the server.
2. Open the Server Settings Folder.
3. Open the General Server Settings folder. The recording algorithm can be toggled between ADPCM and CELP. To change to ADPCM, select 'ADPCM' from the Recording Algorithm pulldown menu and hit the Update button. To change to CELP, select 'CELP' from the pulldown menu and hit the Update button.



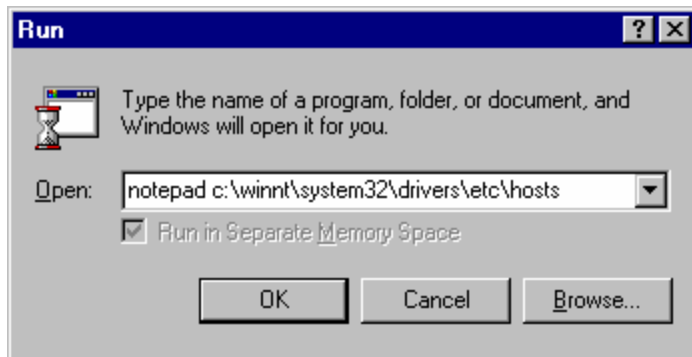
Verify the service observing FAC setting

1. Manually service observe an agent using a telephone. This can be done by dialing the Service Observing FAC followed by the extension of the agent to be recorded. Consult with the switch administrator if a service observing session cannot be completed manually.
2. Once a manual service observing session has been completed, login to Port Manager.
3. Verify that the service observing FAC is correct.

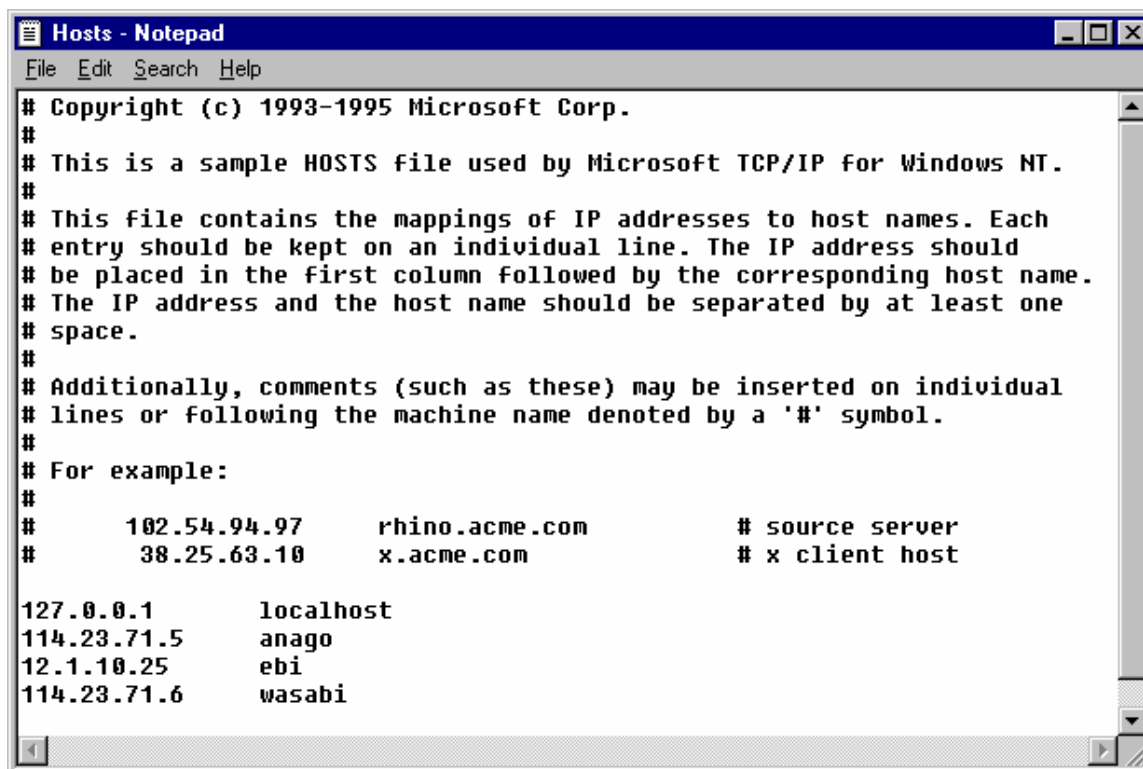


Update the client's hosts file

1. Choose "Run" from the Start menu.
2. Open the hosts file using notepad. The pathname shown below is for a Windows NT client.



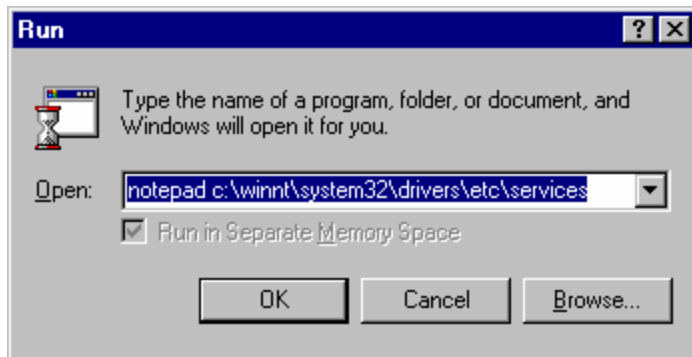
3. Add the server to the hosts file. In the example shown below, the server wasabi with an IP address of 114.23.71.6 has been added.



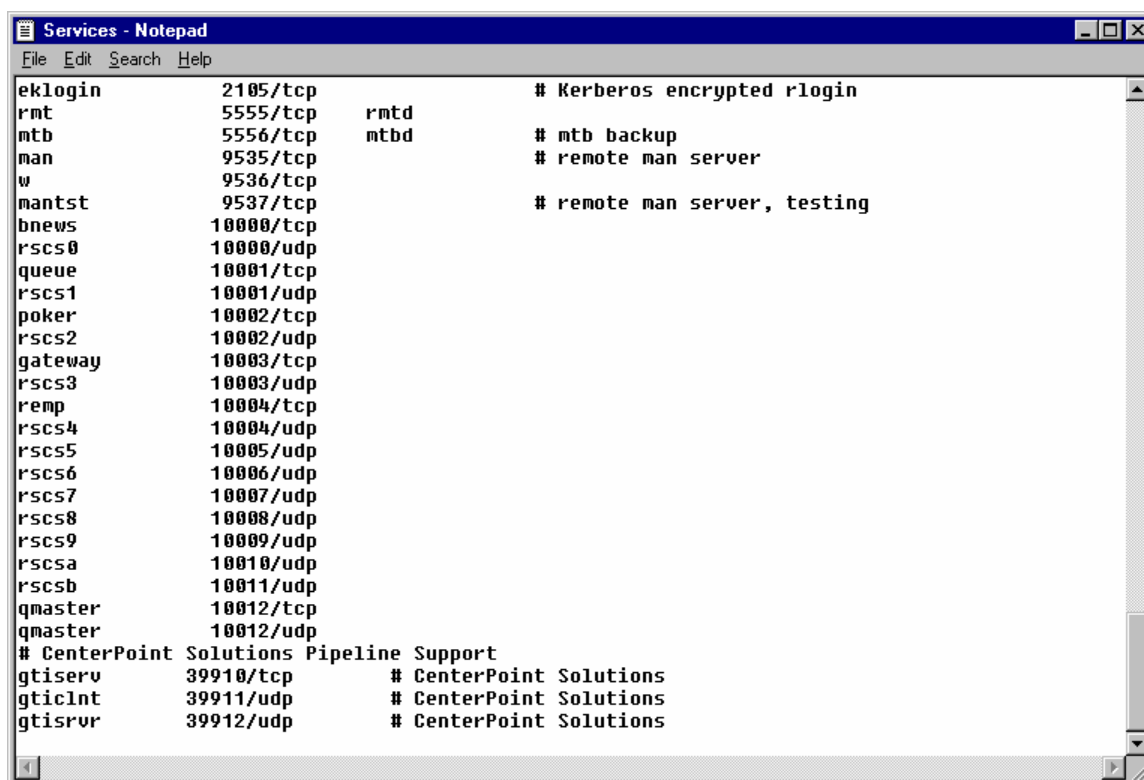
4. Save the file.

Update the client's services file

1. Choose "Run" from the Start menu.
2. Open the services file using a notepad. The pathname shown below is for a Windows NT client.



3. Add any missing gti service entries. In the example below, all three gti services have been added. If multiple entries are present for the same gti service, delete all but one entry. Duplicate entries will not affect Agent Assist's performance.



4. Save the file.
5. Reboot the PC.

Pinging the server

1. Choose "Run" from the Start menu.
2. Enter "ping -t XXX" where XXX is the server name or the IP address. In the example below, an attempt is made to ping the server named "globalwe."



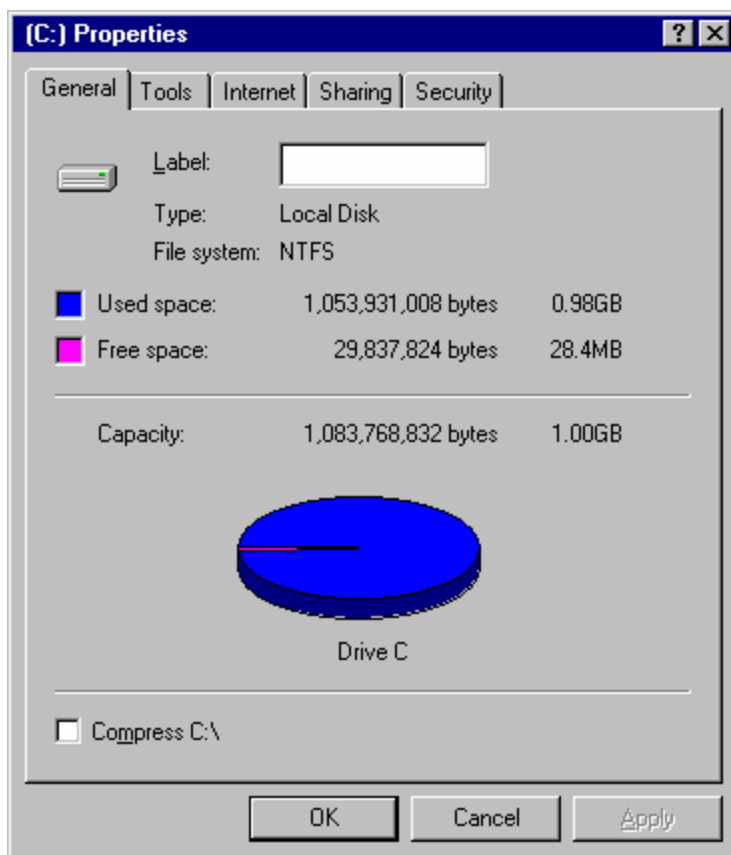
3. Wait for about five seconds and then press Ctrl-C to stop the ping.
4. If the ping is unsuccessful, contact the customer's network administrator.

Checking the version of pipeline.ocx

1. Run Windows Explorer (the file manager, not the Internet browser).
2. Locate "c:\winnt\system32\Pipeline.ocx"(on an NT machine) or "c:\windows\system\Pipeline.ocx" (on a Windows machine).
3. Right click on Pipeline.ocx.
4. Choose Properties from the pop-up menu.
5. Click on the Version Tab.
6. Verify that the file is version 2.5.0553.

Determining the amount of space available on a hard drive

1. Run Windows Explorer (the file manager, not the Internet browser).
2. Locate the icon associated with the drive in question, which is generally drive C.
3. Right click on the drive's icon.
4. Choose Properties from the pop-up menu.
5. Note the amount of free space shown in megabytes. In the example provided, the drive C has only 28.4MB free, indicating that drive space is critically low.



SQL*NET/ODBC Procedures

Testing ODBC connection

From the command prompt on the client PC, type

```
Tnsping conversantIP
```

where conversantIP is the IP address of the CONVERSANT. If you do not get an answer you don't have an ODBC connection. You can also run "32 bit ODBC Test" in the Oracle program group against the CONVERSANT. If you can connect, you have an ODBC connection.

Common Installation & Maintenance Problems

The Windows client application cannot connect to the server.

RESOLUTION: There are six issues that typically cause this problem:

1. Network connectivity - Verify this is not a problem by pinging the server from the PC using the IP address. If this fails, there is a TCP/IP networking problem. Troubleshoot the problem with the customer's network technician.
2. Name resolution - If it is possible to ping the server using the machine name (ex. ping globalso), then this is not the cause of the problem. Otherwise, add an entry for the server to the PC's hosts file.
3. Name mismatch - The server's network name must match the entry in the /etc/hosts file. Use the "uname -n" command to identify the network name. Next, locate this name in the hosts file. If the name does not appear, add it as an alias to the appropriate IP address.
4. Stale process - Connectivity problems may also occur when the plserver or plrecord processes lock up. Restart the process to ensure that they are fully functional.
5. Missing services - Check both the PC and the server services file to make certain that gtiserv, gticlnt, & gtisrvr have been added. If these entries do not exist, add them.
6. Outdated pipeline.ocx - Check the version of the pipeline.ocx file to make certain that it is current. Refer to the section Form Manager Directory Structure for version information. If pipeline.ocx is outdated, delete it from the system and reinstall the Windows client from diskette. Be aware that if a customer is running Form Manager or CallBack Manager, they should be upgraded to version described above.

Recording specific information is not spoken by the Playback Service when messages are retrieved via the telephone.

RESOLUTION: Agent Assist relies on the Lucent package "Enhanced Basic Speech - US_English - Female" to provide the voice prompts for the recording specific values. On occasion, this package is overlooked in the ordering process. To verify that this is the problem log into the system and verify that Enhanced Basic Speech is installed. If the package described above is not on the system, it will be necessary to order and install the package to correct the problem. After the package has been installed, restart the plrecord process to load the messages.

The Playback Service does not answer when called.

RESOLUTION: There are several steps that may need to be taken in order to resolve this problem. First, check the Playback Service state to make certain that it is active and not hung on a call. If the Playback service is not running or appears to be hung, restart the pload process.

For playback problems that persist beyond the restart, it will be necessary to verify the setup of the playback port. Verify the Playback Service port assignment using Port Manager. Also using Port Manager, find the Playback Service extension.

Next, Check for other services on the Playback Service port. Make certain that this extension is the same one that is being dialed when attempting to access the Playback Service. If another service is assigned to the port, either that service must be removed or the Playback Service must be assigned to another port. If the problem has still not been resolved, it will be necessary to verify the Playback Service extension is correct and functional.

The final troubleshooting option is to turn on pload's debugger and to review the log file entries related to playback. Refer to the section on debugging for further instructions.

The status of a recording is "Reorder tone (fast busy) instead of Completed (no error).

RESOLUTION: This problem is generally caused by an incorrect service observing setting. There are three things to look for: verify the service observing FAC setting in Port Manager, verify that the recorded extension is service observable, and verify that the server's ports can service observe.

The recording appeared to complete without error, but when it is played back it sounds like a siren.

RESOLUTION: See above (Problem Four).

Some recordings have a status of "Completed/No recording made"

RESOLUTION: Check for other services on the port. Another service may be using the port when AA attempts to start recording. AA will not take the port away from the other service if it is in use, nor will it attempt to grab a different port. If this is a frequent problem, consider removing the competing service from the ports that AA uses for recording.

Recordings appear to be completely missing from Retriever, AO, or CEO.

RESOLUTION: The user may have signed in using a login that does not have supervisory privileges over the recorded user. Try to review the recordings using AA Administrator that will display all available recordings, not just the recordings that an individual supervisor has access to. If the problem was the result of inadequate privileges, it may be necessary to update the agent to supervisor assignments. If the recordings do not show in Administrator's recording window, it is very likely that they were deleted either accidentally or by another user.

The user is unable to schedule a recording for a user because the user does not appear as a choice when setting up the recording.

RESOLUTION: See above.

The Agent Assist client has been installed; however, some of the programs do not appear in the Agent Assist program group (generally Administrator and Port Manager).

RESOLUTION: Verify with the customer that the PC in question will actually need to have the missing programs installed. If the PC is an agent PC, there may be no need to have Administrator and Port Manager installed. If the PC does need to have the missing modules installed, reinstall AA. During installation, make certain, that all of the desired programs are selected on the "Select Components" screen of the installation wizard.

Recordings are being made one hour later or earlier than scheduled.

RESOLUTION: Verify that both the client and the server have the correct time. Also make certain that the timezone and daylight savings time settings are correct on both machines.

The user is unable to retrieve recordings from the server to the PC.

RESOLUTION: First make certain that the recording that is being retrieved has a status of "Completed (no error)". Second, make certain that there is plenty of room available on the PC's destination hard drive. When retrieved, the file format is converted to WAV. WAV files are very large and if the disk is nearly full, an error may result. If the drive that the user is attempting to retrieve recordings onto is extremely low on disk space, the user will need to either free up some room on the drive or retrieve the recording onto a different drive.

A recording starts without a problem and then moves to a status of Error(complete).

RESOLUTION: All Agent Assist modules have an associated priority. If all ports in "Usable for recording" status are being used and a recording request is made by a higher priority application, a lower priority recording will be bumped. When this happens, the lower priority recording is stopped and moves to Error(complete) status and the higher priority recording is started. If all ports are being used by applications with priorities that are equal to or higher than the requesting application, no recordings will be bumped and the requested recording will go into error status.

Fixes and Enhancements for Agent Assist

Port Manager and Pipeline Server 2.9.1

Number	Description
122	Need to make "pie" icons in VRU Disks match display "bars"
146	Pipeline Server/Port Manager - Modify pipeline server so that it goes to /util and runs everything that is there. Runs everything that is there instead of running aaclean specifically by name so we can add cleanup for Form.
341	Throughout the Port Manager we use PortManager (without a space) and Port Manager (with a space). Need to use Port Manager (with a space) on all the screens in Port Manager.
1186	Logging should iterate user through different levels of debug every time you type kill -USR2 [process number].
1187	Table order not correct in impdrop.sql so that when a restore is done, tables are not dropped and therefore not replaced by what is in the export.dat file.
1202	Login prompt "Username / Ext" is misleading. Changed the login screens for all products to say "Username" rather than "Username/Ext."
1295	Attendent is spelled wrong, it should be Attendant.
1296	When backing up Port Manager, the progress indicator bar doesn't really show progress. This bug is now obsolete because the backup functionality will be re-written for execution from the back end (see bug #1380).
1380	Need shell script for backup and restore functionality to capture output from tar command. The current backup/restore functionality resides on the front end in Port Manager and is defective in that the user will never see a prompt to insert a second tape if one is required to perform a backup. Therefore, these functions should be moved to the back end where feedback from the backup command "tar" is viewable.
1433	Backup and Restore command buttons should be removed from Port Manager. The backup and restore functions are now handled on the back-end, so the command buttons Backup and Restore should be removed from the right frame that appears when the Server Settings folder is clicked.
1438	Discrepancy exists between edit and error message for local outdial digits in Port Manager. Error message needs to be changed to correctly reflect the edit that occurs for local outdial digits.
1439	Discrepancy exists between edit and error message for long distance outdial digits in Port Manager.
1452	When you change from ADPCM to CELP, you get a message box which you have to acknowledge with an OK or Cancel. If you hit OK, you SHOULD change the recording algorithm to CELP but in fact you don't. You really need to hit Update again to change the algorithm. Changed where the edits occur to avoid the problem
1459	A separate screen in the Applications Folder of Port Manager is showing up for Dealer Locator Service and Auto Attendant for certain licenses.

Port Manager and Pipeline Server 2.9.2

Number	Description
1835	The Backup and Restore functions need to provide a Database and Voice Files Only option so that the executables won't inappropriately be copied to a newer Conversant version. In addition, the sequence numbers need to be dropped before restoring the database data.

Agent Assist 2.9.1

Number	Description
1013	When I cancel out of the Connect to Server dialog box, AgentNow! appears as Connected.
1093	When I try to delete a recording that has an attached evaluation, no error message appears & it remains. Changed recordinglist control to report database row deletion errors to the user. This control is used in Agent Assist Admin, Recording Retriever, AO, CEO, and Scoring Manager.
1124	Make sure we can support 18GB hard drives on V8 platform. Created a 4GB voice1 file system on aces and put in a couple really big files that take up 51% (which would be a little over 2GB). Made an AA recording, a callback, and a survey. I will leave the big files on aces so all system testing will be done in a 4GB file system - over half full.
1310	The ability to listen to .lvp files requires the user to open a file directly through the lvp player. In other words, before the user has the ability to play any lvp recording in any AA application, they must open it using the Lucent Voice Player first. Addressed and fixed in the installation/setup routine for AA, FM, CBM, SM.
1320	Changing the password of a supervisor removes all assigned agents. Changed front end so that rows are not automatically deleted from pl_supervisors .
1327	Password shows up in sysmon. When using the playback functionality, the password entered by the user shows up in sysmon after it is entered.
1437	For a Supervisor with 6 associated agents, when I select to record in AgentNow!, the app records a different extension than I have selected. Fixed by initializing variable used to keep track of agent count to zero upon refresh_click.
1483	When I entered a shift of 2:30 PM - 10:30 PM I got a recording scheduled for 2 PM and when I had a shift of 4:30 PM to 10:00 PM it picked a time of 4 PM - I think it is ignoring the 30 minute intervals and just going with the hour. Changed both CEO and AO ScheduleWizard Forms to take the minutes as well as the hours into account in determining which time slots are within the range specified by the user.

Agent Assist 2.9.2

Number	Description
1584	Add code to Recording Retriever (impacts AO, CEO, Administrator, and Retriever modules) to check for new status F. Add "Waiting to Record Incoming Call" to all four resource files.