



IP Office

ContactStore Installation Manual

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Preventing toll fraud

"Toll fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, anyone who is not a corporate employee, agent, subcontractor, or person working on your company's behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya fraud intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, call Technical Service Center Toll Fraud Intervention Hotline at +1-800-643-2353 for the United States and Canada. For additional support telephone numbers, see the Avaya Web site:

<http://www.avaya.com>

Select Support, then select Escalation Lists. This Web site includes telephone numbers for escalation within the United States. For escalation telephone numbers outside the United States, select Global Escalation List.

Providing telecommunications security

Telecommunications security (of voice, data, and video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company's telecommunications equipment by some party. Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment"). An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or person working on your company's behalf. Whereas, a "malicious party" is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent. Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Use (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including, but not limited to, human and data privacy, intellectual property, material assets, financial resources, labor costs, and legal costs).

Responsibility for your company's telecommunications security

The final responsibility for securing both this system and its networked equipment rests with you, an Avaya customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources, including, but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure your Avaya-provided telecommunications systems and their interfaces. Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces. Any other equipment networked to your Avaya products.

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Avaya support

For support please contact with your system maintainer.

Preface

About this guide

The *IP Office ContactStore Installation and Configuration Guide* provides details of how to install and configure IP Office ContactStore software.

The procedures in this document assume that the system has been planned and designed in accordance with the *IP Office ContactStore Prerequisites Guide*.

Intended audience

This document is designed to be used by Avaya professional services staff, business partners, and system integrators.

Summary of information included in this guide

This guide provides the following information:

Chapter title	Description
Chapter 1: Configuring Avaya System Components	This chapter shows how to configure the IP Office system so that it works correctly with the ContactStore software.
Chapter 2: Installing ContactStore	This chapter describes how to install the ContactStore software that is provided on the single distribution CD.
Chapter 3: Licensing	This chapter describes the free trial period and how to license your system.
Chapter 4: Configuring ContactStore	This chapter shows how to set up the ContactStore software for your replay needs.
Chapter 5: Completing the System Setup	This chapter provides guidelines for testing the installation. It also includes instructions for using the ContactStore Search and Replay application.
Glossary	The glossary defines the terms you need to understand IP Office ContactStore.
Index	The index lists key words and phrases that you can use to quickly access information in the guide.

Conventions used in this guide

The following table shows how user input, output and instructions are highlighted in this guide, as well as special notations that you will see as you use this guide.

To show...	This style is used	For example...
Information shown on screen	Fixed width	You should see the prompt below: login:
Characters that you should type exactly as shown	Fixed width, bold	Enter the following command: mount /mnt/cdrom
Characters that you should replace with appropriate information	<i>Fixed width, bold italic</i>	Browse to the new server by entering http:// <i>servername</i> :8888
Menu selections, buttons and tabs	Bold	Click on the Install button.
Helpful hints that can improve the efficiency or effectiveness of your work	Tip:	Tip: Use a photocopy of the <i>Header List Worksheet</i> to plan each header list.
Important details that we want to make sure that you do not overlook	Note:	Note: Media Encryption may or may not show up on this form.
Advice that can help you avoid undesirable results	 Important:	 Important: If the network does not meet the three conditions listed, there will be no media resources.
Situations that can result in: • Harm to software • Loss of data • An interruption in service	 CAUTION:	 CAUTION: Perform this procedure only after normal business hours. This procedure restarts all links on the interface, and can cause a temporary loss of service.
Situations that can result in harm to hardware or equipment	 WARNING:	 WARNING: A fractured or broken ferrite is not effective for EMC control.

Additional resources

The following guides contain additional information that may be helpful:

- *IP Office ContactStore Prerequisites Guide*
- *IP Office ContactStore System Administration Guide*
- *IP Office ContactStore Search and Replay Instructions*
- *Avaya IP Office 3.0 Manager Manual*
- *Avaya IP Office 3.0 Voicemail Pro Installation*
- *Avaya IP Office 3.0 License & Feature Key Server Manual*
- *Avaya IP Office Installation Manual*

Note: Avaya IP Office documentation is available through the Avaya online support Web site, <http://support.avaya.com>.

Chapter 1

Chapter 1: Configuring Avaya System Components

This chapter shows how to configure IP Office so that it works correctly with the ContactStore software.

This Chapter details only those configuration tasks that are required for proper operation of IP Office ContactStore. For complete information about IP Office, please refer to the following documents:

- *Avaya IP Office 3.0 Manager Manual*
- *Avaya IP Office 3.0 Voicemail Pro Installation*
- *Avaya IP Office 3.0 License & Feature Key Server Manual*
- *Avaya IP Office Installation Manual*

Avaya IP Office documentation is available through the Avaya online support Web site, <http://support.avaya.com>.

Configuring an IP Office user to use ContactStore

A User must be given access to utilize the ContactStore. Follow the steps below to give access to a User to the ContactStore Voice Recording Library:

1. Open the Manager application.
2. In the Configuration tree select **User**.
3. Select the User you want to utilize the ContactStore. Double click the User or right click and select **Edit**.
4. Select the Voice Recording tab
5. Check the Voice Recording Library (Auto) to enable Automatic voice recording to ContactStore or Voice Recording Library (Manual) to enable Manual voice recordings to utilize the ContactStore.
6. After editing a User you should always save your configuration file.

Note: The IP Office supports a maximum of 8/9 digit extensions. The ContactStore only supports a maximum of 7 digit extensions. To enable full search capability ensure you set a maximum extension limit of 7 when using the ContactStore.

Voicemail Pro

The Voicemail Pro must be installed for the IP Office ContactStore to operate. You can configure a limited amount of functionality through the Voicemail Pro, such as the maximum record time and can set access to the Voice Recording Library through the Leave Mail Action.

1. Open the Voicemail Pro client application.
2. From the menu bar, select **Admin | Preferences | General**
3. Set the **Maximum VRL Record Time (secs)** for the messages on the ContactStore.

The Leave Mail Action allows a caller to leave a message on the ContactStore.

1. Open the Voicemail Pro client application.
2. Create a Call flow
3. Select the **Leave Mail Action** and add it to the call flow
4. Double click the **Leave Mail Action**
5. Select the **Specific** tab
6. Select the **VRL** option. This will route all voicemails to the ContactStore Voice Recording Library.

Chapter 2

Chapter 2: Installing ContactStore

This chapter describes how to install the ContactStore server software that is provided on the second CD of the Voicemail Pro CD set.

Before you install the software

The following sections describe procedures that you need to complete before you install the ContactStore software.

The following scenarios are supported by Avaya for installing the IP Office ContactStore solution. These scenarios relate to installing the ContactStore and Voicemail Pro application.

- Same Drive - Separate Partition
- Same Server - Separate Drives
- Separate Servers

Disk Partitions

We recommend that you install ContactStore on a dedicated drive partition. This enables the software to monitor the available disk space and automatically delete your oldest recordings to make room for newer ones as your disk fills.

If you install the software onto a partition that other software uses, you may find that, over time, the amount of storage available for your recordings decreases, due to gradual build-up of log files, internet caches, temporary files, and so on. ContactStore is designed to control the growth of its own such files in its own partition but cannot do so for other applications.

The first step of the installation process is for you to specify the partition and path onto which ContactStore should be installed. See the *IP Office ContactStore Prerequisites Guide* for information on calculating the size of disk that you will need in this partition. A minimum of 20GB is recommended to allow for at least 10GB of recordings (over 1000 hours of audio) to be held online.

DVD Drive Support

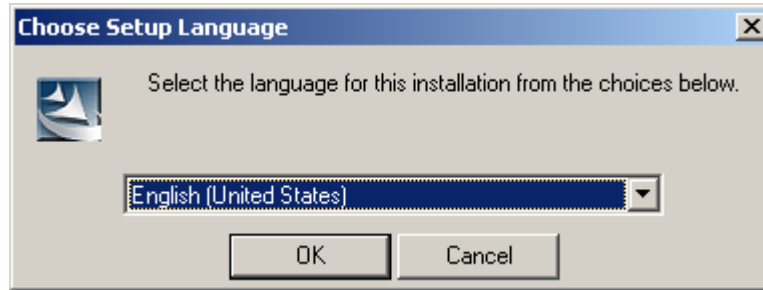
If you intend to use a DVD+RW drive within your ContactStore, you should install it before you install the software. You will also need to install Nero Version 6. If this did not come bundled with your drive, you will need to purchase and install it separately (www.nero.com). You can do this after you install the ContactStore software; however, no archive media will be created until you install the drive.

Installing the software

Follow these steps to install the software:

1. Install and configure the IP Office Manager application including the License & Feature Key server.
2. Install and configure the Voicemail Pro application.
3. Add the ContactStore License to the Manager application. The License is called 'VMPro Recordings Administrators'
4. Insert the ContactStore Distribution CD into the CD drive.

The following prompt is displayed.



Note: If the installation program does not start automatically, use Windows Explorer to access the CD drive and double-click **setup.exe** to start the program.

2. Use the drop-down menu to select the language to use and click **OK**.
3. Click **Next>**.

The Microsoft SQL Server Desktop Engine (MSDE) will be installed automatically. It will be located in your Program Files path, as recommended by Microsoft. Since the ContactStore installation program installs a named instance of MSDE ("ContactStore"), it can co-exist with any other installation of MSDE you may already have.

4. Select the path into which to install the application. Please refer to Disk Partitions for additional information.
5. Click **Finish**.

The installation should complete within a few minutes. You will be required to reboot the server in order to complete the installation. After rebooting;

6. Connect the ContactStore server to the IP Office via the Local Area Network port.
7. Verify connection by entering <http://myservername:8888/> in your browser, replacing **myservername** with the IP address or hostname of the ContactStore.
8. The first time you access the Search and Replay page you will be asked to install ActiveX control. Refer to Configuring your browser later in this manual.

Follow the remaining chapters of this document to see how to access the web application, accept the license terms and configure the system for initial use.

Implementing advanced configuration options

A number of advanced options require that you edit the properties file **\\properties\\csipo.properties**. This file is located beneath the path into which you installed ContactStore. (The default path is **C:\\Program Files\\Witness**). You can use Notepad or any other text editor to make the changes to this file. The following sections describe the changes that you can make to this file. Before editing this file it is recommended you create a backup.

Installing MSDE to a different path

If you are sure you want to install MSDE to a path other than that defined by the environment variable "ProgramFiles" then set this variable to the path you require; perform the installation and then set it back again.

Adding hierarchical file storage support

If you intend to configure the recorder so that recordings are stored on a network share, where the ContactStore cannot or should not attempt to determine the amount of free disk space, you may need to disable the deletion of old call records. You will then need to ensure that the share does not fill (either manually or by some automated means, such as a Hierarchical File Storage system) to ensure that there is always space available for new recordings. To disable the deletion of old call records, add the following line to the properties file:

csipo.diskmanager=false

The recorder will now NOT attempt to delete old recording files; therefore, you must configure the HFS system to migrate older files to your tape library as necessary.

When attempting to replay calls from files that have been migrated to tape, there is a delay before the call is replayed. If the delay is 30s or so, then the replay application will work; longer delays may trigger a time-out. If a time-out occurs, wait a few minutes and then retry. The file may be restored by the time the second replay request is made.

Installing on a separate machine from VMPro.

To install ContactStore on a separate machine, you will need to

- a) Make the Voice Recording Library on the VMPro server visible as a network share
- b) Configure your security so that the ContactStore service can read and write to this share.
- b) Create and set a registry key on the ContactStore server to tell ContactStore the location of the share. Set the key HKEY_LOCAL_MACHINE\SOFTWARE\Network Alchemy\Voicemail\Directories\VRDir to be a string containing the name of the share.

Chapter 3

Chapter 3: Licensing

This Chapter describes the available licensing options for ContactStore for IP Office.

Licensing Options

The full functionality of the IP Office ContactStore is available through purchasing a License. The License IP400 ContactStore for IPO RFA should be requested from your system maintainer.

However, IP Office ContactStore will operate with a free 45-day evaluation license. This time period starts from the time at which you make your first recording with the system. During this period, the product is fully functional.

 **WARNING:** During the timed trial period, the administration pages will warn you that you are running on a timed license and that following the expiration date, ContactStore will DELETE subsequent recordings. It is therefore important that you install a full license BEFORE the end of the trial period if you do not wish to lose any recordings.

Even after the trial period, you will still be able to access recordings made during the trial - it is only newly made recordings that will be deleted rather than processed by ContactStore.

Note: This does not apply to recordings made and kept within your VoiceMail Pro system - only to those directed to the Voice Recording Library (VRL).

At any time during the trial period, or after it, you may purchase a license for the product to run on one or more of your IP Office systems. As you install the supplied license on an IP Office, the ContactStore will automatically detect this as you make the next recording and will process recordings from that system. Until a recording is made you will continue to see a warning message on the ContactStore administration screens. If you have multiple IP Office systems in a Small Community Network (SCN), you must purchase and install a separate license for each.

 **Important:** Once one or more of your IP Office systems has had a full license installed and a recording has been made, you will continue to receive daily warnings about the trial period - for any other IP Office systems which are not licensed. Recordings made on these unlicensed systems will continue to be processed up to 45 days from the date of the first recording (made by the system as a whole) but thereafter recordings made on these systems will be deleted rather than processed. Daily warnings will continue to be raised in this case.

Installing a full license

If you have purchased a full license for ContactStore for one or more of your IP Office systems, you should now install this according to the instructions provided with your IP Office system.

ContactStore will continue to show the warning message until the first recording is received after you have installed the license on your IP Office system.

Once the server is licensed, you need to configure it as described in the next chapter.

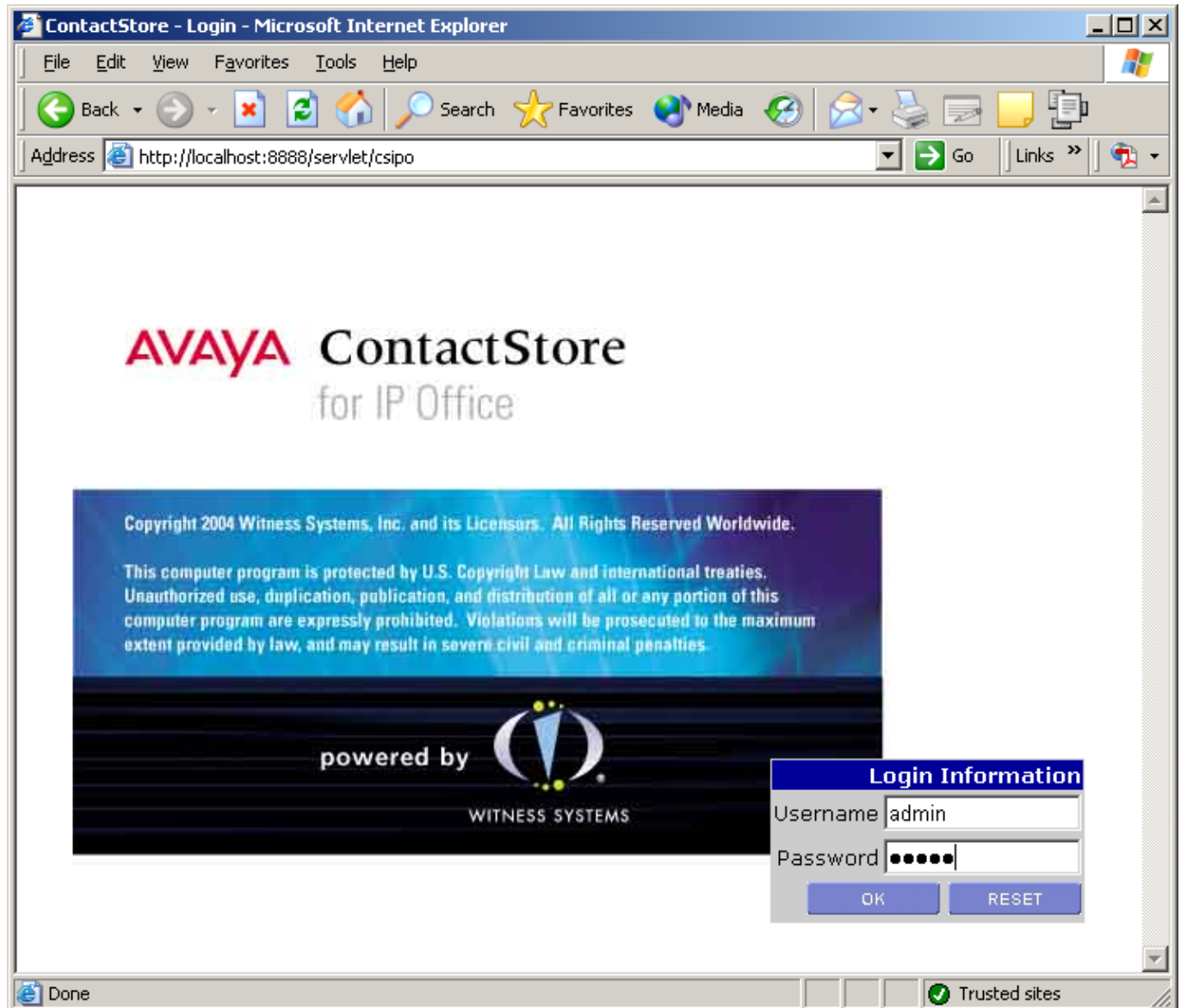
Adding additional licenses

You can add ContactStore licenses to additional IP Offices (if your VMPro supports multiple IP Offices) at any time. These will be detected automatically by ContactStore as the first recording from each switch is processed after the installation of the license. This will be applicable if you have Multiple IP Offices in an Small Community Network (SCN) using Centralized Voicemail Pro. Until you do so, any recordings received from unlicensed IP Office servers will result in a Warning Alarm being generated each day to ensure that you are aware that the timed license will expire or has expired.

Initial Login

Follow these steps to access ContactStore for the first time:

1. Open a browser window (using Internet Explorer) on any PC that can access the ContactStore server.
2. Navigate to <http://myservername:8888> (where **myservername** is the host name or IP address of the ContactStore server).
3. You will be directed to the Login page shown below.
4. Enter a username of your choice. The password field is ignored on this initial login.



5. Click **OK**.

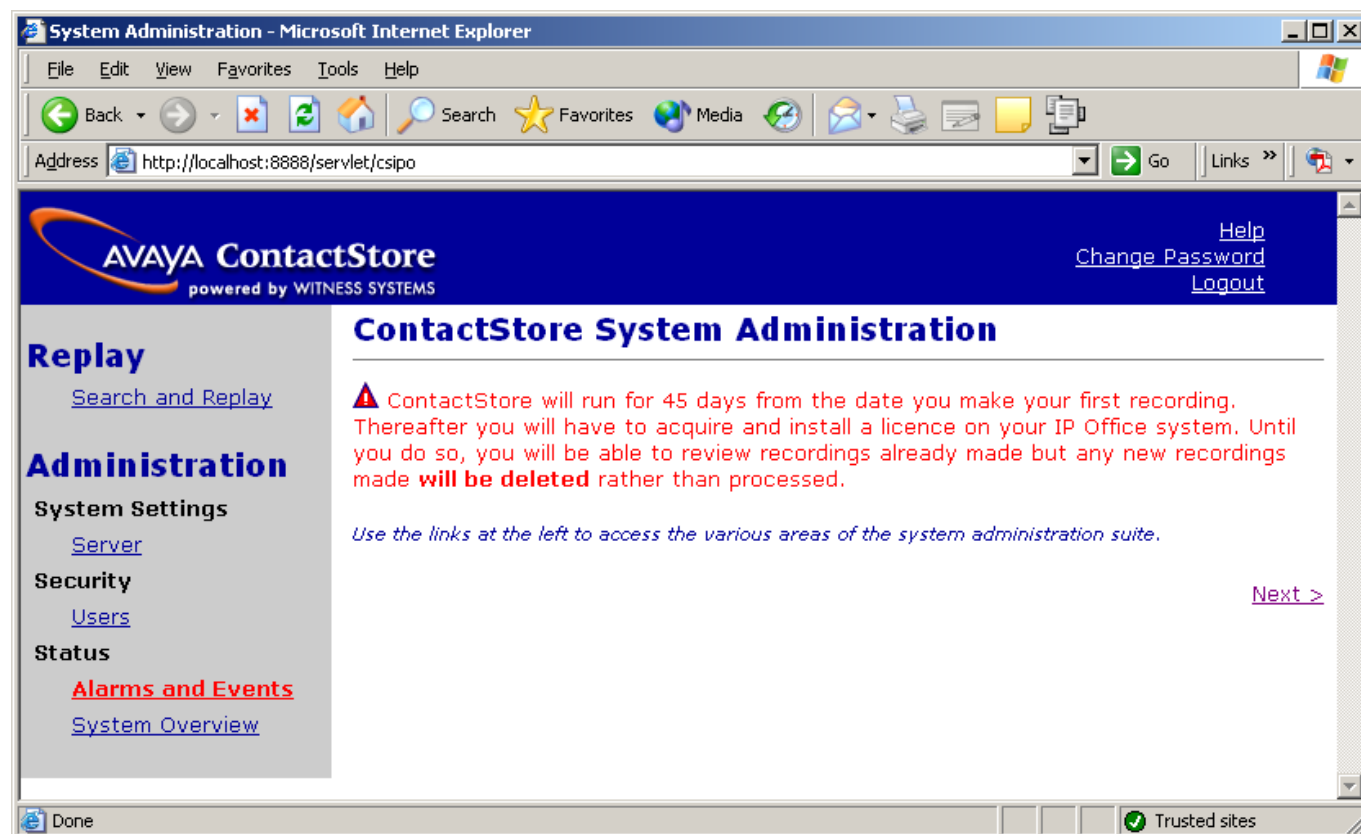
As the first user of the system, you are automatically added to the user database with administrator rights. You are then redirected to the **Change Password** page, shown in the following screen.

6. Leaving the **Old Password** field blank, enter a **New Password** and enter it again in the **Verify New Password** box.



7. Click **OK**.

You are now logged into the system and the Introduction page is displayed. Unless there are already any recordings to process and you have installed a full license, you will see the timed trial warning as shown below.



Proceed to the next chapter to configure your system.

Chapter 4

Chapter 4: Configuring ContactStore

Once you have completed the licensing, you need to verify the ContactStore configuration. In most cases, the default settings for many of the configuration options in IP Office ContactStore are valid. However, there are some settings that have no defaults. This chapter explains how to set these options.

Note: This chapter only discusses configuration settings that have no default value or whose default value needs to be set or verified for your system. For a complete description of the System Administration program, please see the *IP Office ContactStore System Administration Guide*.

Verifying the initial settings

There are some configuration details that **must** be set in order to safeguard the operation and recoverability of your system. Any that cannot be left at automatic defaults are shown **in red** on the appropriate administration page.

To complete the configuration, follow these steps:

1. From the **System Settings>Server** page, shown below, work through the Administration pages from top to bottom of the navigation pane shown on the left of the page, or click on the **Next >** link at bottom right of most pages to follow this logical order through the system configuration.

System Administration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Mail Print Address Bar Go Links

Address: <http://localhost:8888/servlet/csipo?cmd=csipo>

AVAYA ContactStore
powered by WITNESS SYSTEMS

[Help](#)
[Change Password](#)
[Logout](#)

Replay
[Search and Replay](#)

Administration
[System Settings](#)
[Server](#)

Security
[Users](#)

Status
[Alarms and Events](#)
[System Overview](#)

Server Settings

These settings determine how and where ContactStore stores your recordings and the details about them. Any shown in red are invalid and must be changed.

Recorder Settings	Setting	Edit
Recorder Number	1	Edit
Directory path for recordings	d:\witness\calls	Edit
Database Backup Path	\\central\cstore	Edit
Optional Internal DVD+RW Drive Letter	e	Edit
Start DVD+RW volume labels with	Calls	Edit
Retain call details for (months)	60	Edit

These settings determine how and where ContactStore sends e-mails when events are raised.

Alarm Notification	Setting	Edit
SMTP Mail "From" address	Not defined	Edit
SMTP Mail Server	Not defined	Edit
SMTP Username	Not defined	Edit
SMTP Password	Not defined	Edit
Send alarm/event e-mails to	Not defined	Edit

[< Previous](#) [Next >](#)

Done Trusted sites

2. Verify that all settings are appropriate for your system; enter valid values for any that are shown **in red**.

The following sections show the parameters that you need to verify or set appropriately.

System Settings

Check all the settings on the System Settings page immediately after accepting the License Agreement.

Server

The Server page determines how the ContactStore server operates. Settings are split into two groups:

- Those affecting the storage of recordings and details about them.
- Those used to allow sending of alarms and events via email.

System Administration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://localhost:8888/servlet/csipo?cmd=csipo> Go Links >>

AVAYA ContactStore
powered by WITNESS SYSTEMS

[Help](#)
[Change Password](#)
[Logout](#)

Replay
[Search and Replay](#)

Administration
System Settings
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[Alarms and Events](#)
[System Overview](#)

Server Settings

These settings determine how and where ContactStore stores your recordings and the details about them. Any shown in red are invalid and must be changed.

Recorder Settings	Setting	
Recorder Number	1	Edit
Directory path for recordings	d:\witness\calls	Edit
Database Backup Path	\\central\cstore	Edit
Optional Internal DVD+RW Drive Letter	e	Edit
Start DVD+RW volume labels with	Calls	Edit
Retain call details for (months)	60	Edit

These settings determine how and where ContactStore sends e-mails when events are raised.

Alarm Notification	Setting	
SMTP Mail "From" address	Not defined	Edit
SMTP Mail Server	Not defined	Edit
SMTP Username	Not defined	Edit
SMTP Password	Not defined	Edit
Send alarm/event e-mails to	Not defined	Edit

[< Previous](#) [Next >](#)

Done Trusted sites

Each setting is described below in the order in which they are listed on screen.

Recorder Number

This defaults to 1. If you have more than one ContactStore within your business, you should set each one to a different number to ensure that recordings made on each of your systems are readily distinguishable from each other. The ContactStore application gives each recording a unique recording reference number. If you do not set each of your systems to a different number, it may be impossible to identify which system a given recording came from.

Directory Path for Recordings

This defaults to **calls** beneath the path into which you installed ContactStore. All recordings are stored beneath this root folder. Before you start recording, you can change this path in order to use a different partition. You can also use a share on another server but only if access rights are established such that this share is automatically visible to the application without the need for additional authentication. Be sure that the share is always accessible to the recorder. Avaya cannot take responsibility for failures due

to network outages between the recorder and the share. To change this setting once you have already started recording, copy all folders and files beneath the old location to the new location before you make any further recordings.

Database Backup Path

Enter the name of a folder that ContactStore can use as a backup destination. The contents of the call details database are backed up to this location with a full backup every Sunday; incremental backups are added to the file the other nights of the week. You should arrange for these files (named **ContactStore.dump**) to be archived safely in case you ever need to restore the call details database. If you specify a fileshare on a remote computer, you will need to configure a fileshare to allow access to a user account and then set the ContactStore service to 'Run as...' that user. To allow ContactStore to function, you must ensure this user account has at least the same access rights as the local system account which the service uses by default.

Optional Internal DVD+RW Drive

This setting shows the drive letter of the DVD+RW drive being used to archive calls. This setting is typically D if you have replaced the supplied CD drive with a DVD+RW drive. If you do not have such a drive, or do not want to use it for recording archival, leave it blank. It will show as **Not defined**.

Start DVD+RW volume labels with

Each DVD+RW media to which calls are written is given a unique label. These are sequentially numbered and start with the string specified here. The setting defaults to **Calls** but can be set to any string of up to 5 characters. This field is short so that a 4-digit sequence number can be appended to it.

If you only have a single ContactStore server, you can leave this at the default. If you have more than one ContactStore server in your enterprise, verify that each has a different string set for this label root so that media produced by each system can be clearly distinguished from each other.

If you change this setting while a DVD is being written, the system will stop writing to that disk. Insert a new one, which will be labeled with the new name. The sequence numbers after the name will continue to increase rather than be reset to 0000.

Retain call details for (months)

At some point, the size of the call details database will become either unmanageable or will fill the available disk space. Specify, in months, how long call detail records are retained before they are purged from the system. This ensures that the database stabilizes at a finite size.

Purging is carried out at, or shortly after, 1:00 A.M. each morning and does not impact recording or replay.

SMTP Mail "From" Address

Set the name from which alarm email messages originate. For example, "ContactStore Head Office."

SMTP Mail Server

Enter the name of the SMTP mail server on which you have established an email account that the ContactStore can use to send email messages regarding alarms and events. If you leave this blank, the system will not send email messages when alarms occur; if you leave this setting blank, you can leave the remaining settings on this page blank.

SMTP Username

Leave this blank unless your SMTP server requires that any sender be authenticated. If required, set the username of the SMTP account here.

SMTP Password

Leave this blank unless your SMTP server requires that any sender be authenticated first. If required, set the password of the SMTP account here. The password is masked when entered in this field.

Send alarm/event email to

Specify the email address (up to a maximum of 100 characters) to which alarm and event messages should sent. Separate multiple addresses with a semi-colon (;). The email recipient can be a local system administrator, a manned help-desk and/or suppliers' support desks if you have a support agreement that includes this facility. The system sends an email message each time an alarm occurs or is cleared. It also sends an email once per day as a "heartbeat" to let you know it is still operating. Failure to receive the daily heartbeat message should be investigated; it could indicate that the server has failed. Note that emails are only sent every 10 minutes

Entering an incorrectly formatted email address (such as one that does not include "@") will stop all emails from being sent; this will be reported in the Alarms table, however, you will not receive email notification. Entering a non-existent but validly formatted email address, on the other hand, does not stop email reaching others in distribution list. Confirm that you are receiving emails correctly after you make any changes to these settings.

Security

The **Security** section includes only one link, **Users**.

Users

Use the Users Security page to add new users, delete existing users and modify users' details, such as access rights, administrator rights, or reset their password.

! Important: The System Administration application will run for anyone if there is no user defined with administrator rights. To avoid locking yourself out of the system by accident, first create a user record for each administrator you need, then add search and replay only users.

System Administration - Microsoft Internet Explorer

Address: <http://localhost:8888/servlet/csipo?cmd=users>

AVAYA ContactStore
powered by WITNESS SYSTEMS

[Help](#)
[Change Password](#)
[Logout](#)

Replay
[Search and Replay](#)

Administration
System Settings
[Server](#)
Security
[Users](#)
Status
[Alarms and Events](#)
[System Overview](#)

User Security

The users listed below are authorised to administer and/or replay calls.

Select	Username▼▲	Admin.▼▲	Comment▼▲	May Replay Recordings owned by Station(s)▼▲	
☐	admin	ADMIN		10-99, 100-999, 1000-9999	Edit
☐	jamest			100-499, 523	Edit

[Add User](#) [Delete selected user\(s\)](#) [< Previous](#) [Next >](#)

Trusted sites

Creating a new user account

To create a new user account:

1. Click Add User at the bottom left to add one or more additional user accounts. The following dialog is displayed:

2. Enter a **Username**. This can be a Windows domain qualified username (for example, corpdomain\johnd) or a local application username (for example johnd).

If you use the domain qualified username, Windows authentication will be performed. To allow users from other domains to log in, you must establish reciprocal arrangements between the domain controller for the domain that the ContactStore server is in and the other domain.

When a local user account is created, the account is initially given a blank password. The new local user is automatically redirected to the **Change Password** form the first time they log in.

3. Check the **User is an Administrator** box to assign that user administrator rights.
4. Use the **Comment** textbox to enter the full name, job title or other identifying information that will help you to administer the user's account.
5. *Optional*. In the text area labeled **Is allowed to replay calls owned by these stations**, enter the list of stations or agents that this user is to be allowed to search for and replay.

Note: The initial account created when the first user logs in is automatically given replay rights to all 2, 3 and 4-digit station numbers. You can modify these rights as required.

Enter a comma-separated list of individual station or agent numbers and/or hyphen (-) separated ranges. Some typical examples are:

- 4000 - user can only replay calls owned by agent 4000. This is a typical entry for a CSR with this Agent identifier that indicates that they can only play their own calls.
- 4000-4019 - user can replay calls owned by any agent in the range 4000-4019. This is a typical entry for a supervisor in a call center in which agent ranges are assigned to teams.
- 4000,4003,4010-4019,4124-4128 - mixture of ranges and individual numbers. This is a typical "real-world" scenario for a supervisor in a call center where the originally assigned numbering plan has been added to over the years.
- 1000-9999 - blanket coverage of all 4-digit station/agent numbers. This is a typical entry for a senior manager with search and replay rights over all recordings.

Tip: If you have several users with the same replay rights, you can select the text in this area and right-click to copy it to the clipboard. You can then paste it into the next account, saving a lot of typing and potential for error.

Note: You do not have to allow a user any replay rights but the only practical uses for this would be:

- To provide an administration account for someone not supposed to replay any calls. However, as with most systems, the administrator is at liberty to change his own settings; you should not rely on this to restrict administrators from replaying calls.
 - To temporarily disable an account. However, a better way to do this is simply to reset the password and then log in as that user and change the password to something not known to the user. This way, their replay rights are left intact and can be more easily altered if you need to re-enable the account later.
6. To quit without changing the account definition, click Close Window.

To save the account definition and keep the window open to create additional user accounts, click Enter and Stay Open.

To save the account definition and close the window, click Enter and Close.

Editing an existing user account

To edit an existing account:

1. Click the **Edit** link next to the user's entry in the list.

The screenshot shows a web-based form for editing a user account. The title bar reads 'System Administration - Microsoft Internet Explorer'. The form fields are as follows:

- Username:** Admin
- Reset Password:** A checkbox that is currently unchecked.
- User is an Administrator:** A checkbox that is currently checked.
- Comment (optional):** An empty text input field.
- Is allowed to replay calls owned by these stations:** A large text area with a scrollbar, currently empty.

Below the text area, there is a small italicized instruction: *Use commas to separate station numbers and dashes to indicate ranges e.g. 1000,1030-1049,2001*.

At the bottom right of the form, there are two buttons: Close Window (with a blue 'X' icon) and Enter and Close.

2. Alter the user's administrator rights, comment and/or replay rights.
3. You can change any of the fields except the user's name. To change this, you must delete and re-enter the user's details as this field is used as the unique key in the database.

To reset a local user's password for any reason, check the box marked **Reset Password** and instruct the user to log in promptly.

If you use the Windows domain qualified username, Windows authentication will be performed, so the **Reset Password** checkbox is irrelevant.

4. Click Enter and Close to save the changes.

Click Close Window to quit without changing the account definition.

Deleting a user account

To delete one or more user's account(s):

1. Click the checkbox in the **Select** column for each user to delete
2. Click the Delate selected user(s) link.

You cannot delete the last administrator account once you have set one up. You must enter a new administrator account before you can delete the (previously only) other.

Completing the configuration

Once you have configured the Administration pages, you have completed the initial system setup.

If you logged into the application with a local user account, you should always use the **Logout** link from any page in the Administration application to exit the application.

Chapter 5

Chapter 5: Completing the System Setup

Once you have installed and configured the IP Office ContactStore, you need to verify that the recorder is storing and indexing recordings correctly.

This chapter provides guidelines for testing the system. It also explains how to use the ContactStore Search and Replay application.

Testing the recording operation

You are now in a position to make test calls to verify correct operation. You should, make a call using each of the stations and call types you have configured to be recorded and passed to ContactStore. This test will confirm basic setup.

You should also check the recording and tagging of any complex call scenarios to be used. These include various transfers, conferences, and so on. This test is recommended to ensure that any configuration problems are discovered early.

Replaying recordings

To test the recording operation of the ContactStore server, you must replay the recordings. ContactStore performs replay of recordings by means of a browser-based application that is accessible with Internet Explorer (IE) V5.0 and higher. The following sections describe how to set up your browser and how to access the application.

Configuring your browser

The Search and Replay page downloads an ActiveX control, which it uses to decompress the audio for replay. If your default security settings prohibit downloading such controls, you need to provide a means of getting the ActiveX control to your users' desktops. Internet Explorer (IE) determines rights by putting web servers into zones and then granting those zones specific rights. To access and use the page, the zone needs the following rights:

- Run ActiveX controls and plug-ins
- Script ActiveX controls marked safe for scripting
- ActiveX Scripting
- Download signed ActiveX controls

Your Intranet zone and/or the Trusted Site zone may already be assigned these rights. If so, you need to verify that the ContactStore is in one of these zones.

Adding ContactStore to a zone

You can add ContactStore to a Trusted Site or Intranet zone.

- To add ContactStore to Trusted Sites:
 1. In the Control Panel, open **Internet Options**.
 2. Click the **Security** tab.
 3. Click the **Trusted Sites** icon.
 4. Click **Sites**.
 5. Uncheck the **require HTTPS** box.
 6. Enter the URL of the ContactStore server and click **Add**.

 **Important:** Internet Explorer does not recognize that a certain Fully Qualified Domain Name (FQDN) and IP address are the same; you must add the URL to the list exactly as you type it in the address bar.

7. Click **OK**.

To verify that you have configured the Zone information correctly, the icon on the lower right side of the IE status bar should show **Trusted Site** instead of **Internet**.

- To add ContactStore to a local Intranet Zone:
 1. In the Control Panel, open **Internet Options**.
 2. Click the **Security** tab.
 3. Click the **Local Intranet** icon.
 4. Click **Sites**.
 5. Click **Advanced**.
 6. Uncheck the **require HTTPS** box.
 7. Enter the URL of the ContactStore server and click **Add**.

 **Important:** Internet Explorer does not recognize that a certain Fully Qualified Domain Name (FQDN) and IP address are the same; you must add the URL to the list exactly as you type it in the address bar.

8. Click **OK**.

Note: You can also specify that sites that bypass the proxy server are in this Zone.

Accessing Search and Replay

To access the Search and Replay application using Internet Explorer:

1. Enter the URL for the ContactStore server in the form: <http://myservername:8888/>, replacing **myservername** with the IP address or hostname of the ContactStore.

Note: To use the hostname, it must be entered into your DNS server.

2. If you are already logged on as a Windows user and this account has been entered into ContactStore, you will immediately access the applicaiton.

Otherwise, when prompted, enter your **Username** and **Password**.

In this case if this is your first time logging on, or if the password has just been reset, the password field is ignored. However, before you can continue, you must change your password.

If your user account has administration privileges, the **Administration** page is displayed when you log in. Use the link at the top left to access the **Search and Replay** page. The **Search and Replay** page also provides a link to return to the administration pages.

Otherwise, once you log in, the **Search and Replay** page is displayed:

The screenshot shows the AVAYA ContactStore web application running in Microsoft Internet Explorer. The browser's address bar displays the URL <http://localhost:8888/servlet/csipo?cmd=viewer>. The page header features the AVAYA ContactStore logo and the text "powered by WITNESS SYSTEMS". On the right side of the header, there are links for [Help](#), [Change Password](#), and [Logout](#).

The main content area is divided into two sections: "Search Filters" on the left and "Results" on the right.

Search Filters:

- Call Start Range:** Two date and time pickers. The first shows "24/08/04" and "00:00:00". The second shows "24/08/04" and "23:59:59".
- Parties:** A dropdown menu and a text input field.
- Length:** A dropdown menu and a text input field.
- Target Number:** A dropdown menu and a text input field.
- A **SEARCH** button is located at the bottom of the filter section.

Results:

The results section displays a table with the following columns: **Call Start**, **Len**, **Parties**, **Type**, and **Target**. The table is currently empty.

The status bar at the bottom of the browser window shows a green checkmark and the text "Trusted sites".

Searching for calls

To search for calls:

1. Use the calendar controls at the upper left to specify the date and time range. Time and date reference when the call segment started.
2. Use the drop-down boxes for each criterion, for example, **Parties**, to specify the operand, such as = equals (numeric fields only).

The drop-down box lists the following operands:

Drop-down	Meaning
	No criteria
=	Equals (numeric fields only)
<	Less than (numeric fields only)
>	Greater than (numeric fields only)
Incl	Includes or Contains (string fields only)
Starts	Starts with (string fields only)
Ends	Ends with (string fields only)

3. In the corresponding textbox, enter the specific criterion, such as 3.
4. Select **Search** to execute the specified search.

As you search for calls, keep in mind:

- Searching on the basis of the details of one or more of the "parties" involved in the call is the most common way to find the calls you are looking for. This will find calls to or from a station, number, or name (partial or entire) that you enter.
- You will find that **Incl** (includes) is the most useful search method when searching for calls involving specific parties.
- If you select the blank option in the drop-down box, any existing entry in the text box next to it will be retained. It won't be applied to the current search, but it makes it easy to add it back into the search criteria later.
- If a recording has a blank entry for a field, it is listed as "N/A" (not available). You cannot, however, search for such records by specifying "starts with N" or "ends with A" or "includes N/A" in the **Search** field; this tag is not present in the database.

Viewing results

The following screen shows a typical result set.

The screenshot shows the AVAYA ContactStore web interface in a Microsoft Internet Explorer browser window. The address bar shows `http://adsvr:8888/servlet/csipo`. The page has a blue header with the AVAYA ContactStore logo and navigation links: [Help](#), [Change Password](#), and [Logout](#). On the left, there is an 'Administration' section with a link to 'Administer System' and a 'Search Filters' section. The 'Search Filters' section includes fields for 'Call Start Range' (from 20/08/04 00:00:00 to 25/08/04 23:59:59), 'Parties' (a dropdown menu), 'Length' (a dropdown menu), and 'Target Number' (a dropdown menu), with a 'SEARCH' button below. The main content area is titled 'Results' and shows a table with 5 columns: Call Start, Len, Parties, Type, and Target. The table contains 10 rows of call data. Above the table are page indicators: 1 2 3 ... 8 Next. The table data is as follows:

Call Start	Len	Parties	Type	Target
20/08/04 16:07:57	00:16	203 (Extn203), 204 ()	Incoming	204
21/08/04 12:18:01	00:11	203 (Extn203), 204 ()	Incoming	204
21/08/04 12:19:30	00:15	203 (Extn203), 204 ()	Incoming	204
21/08/04 12:21:52	00:36	203 (Extn203), 204 ()	Incoming	204
21/08/04 12:23:12	49:59	203 (Extn203), 204 ()	Incoming	204
21/08/04 13:22:30	01:32	203 (Extn203), 204 ()	Incoming	204
21/08/04 13:43:43	00:29	203 (Extn203), 204 ()	Incoming	204
21/08/04 13:57:10	00:00	203 (Extn203), 204 ()	Incoming	204
21/08/04 13:57:53	00:00	203 (Extn203), 204 ()	Incoming	204
23/08/04 12:41:11	00:11	123 (), 204 (Extn204)	Outgoing	123

Click the page indicators (1 2 3 ... 8 Next) above the **Results** table to move through the list of results.

Click the arrows within the column headers (▲ ▼) to sort the results by that column.

A blue arrow indicates the active sort field and direction

The Results list includes the following information:

- Start Time
- Duration
- Parties
- Target - Incoming, Outgoing, Internal or External number dialed (which may not be the same as the number that actually answered the call).

Playing a call

To play one of the calls listed, click the radio button next to the call. The radio button is listed at the left in the column headed by the loudspeaker icon .

The audio is retrieved from the server and an audio waveform is shown in the top bar.



Audio retrieval may take a few seconds to a few minutes depending on the bandwidth of the link between your PC and the ContactStore server.

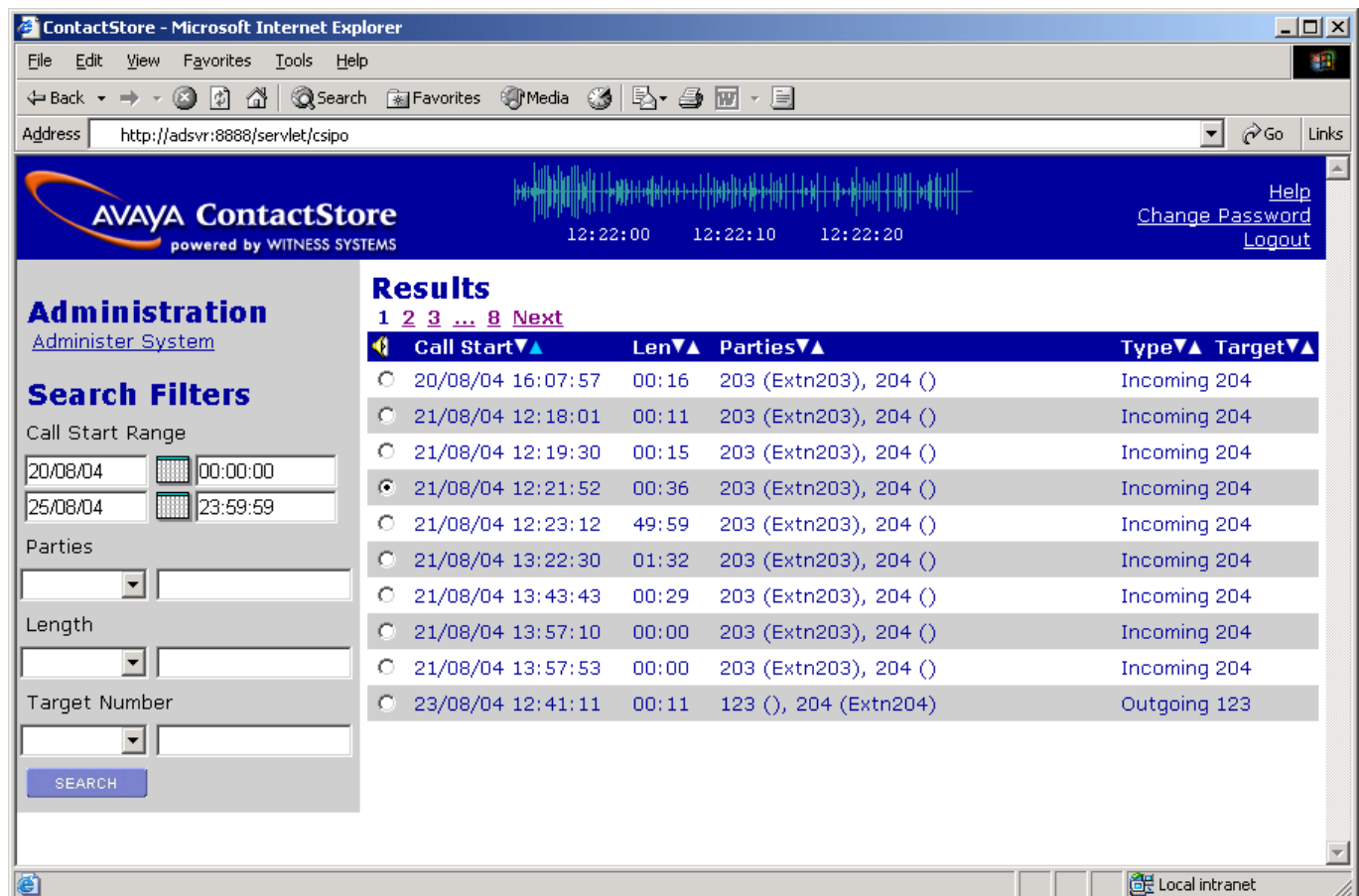
Once the first few seconds of the call have been loaded, click on the audio waveform to play it.

Place your mouse over the audio waveform to display a small control panel that you can use to pause,

skip forward, skip backward, or export the recording to a readily playable .wav file. 

Click anywhere in the audio waveform to play from that point in the call.

Click just to the left of the audio waveform to play from the very beginning of the call.



AVAYA ContactStore
powered by WITNESS SYSTEMS

12:22:00 12:22:10 12:22:20

[Help](#)
[Change Password](#)
[Logout](#)

Administration
[Administer System](#)

Search Filters
Call Start Range
20/08/04 00:00:00
25/08/04 23:59:59
Parties
Length
Target Number
[SEARCH](#)

Results
1 2 3 ... 8 [Next](#)

 Call Start	Len	Parties	Type	Target
☐ 20/08/04 16:07:57	00:16	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 12:18:01	00:11	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 12:19:30	00:15	203 (Extn203), 204 ()	Incoming	204
☒ 21/08/04 12:21:52	00:36	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 12:23:12	49:59	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 13:22:30	01:32	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 13:43:43	00:29	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 13:57:10	00:00	203 (Extn203), 204 ()	Incoming	204
☐ 21/08/04 13:57:53	00:00	203 (Extn203), 204 ()	Incoming	204
☐ 23/08/04 12:41:11	00:11	123 (), 204 (Extn204)	Outgoing	123

Completing user configuration

If you did not define all users in the initial configuration, you should now enter all required user accounts and their replay rights.

Once the users have been defined:

- Test all user accounts to confirm that their replay rights have been entered correctly. To do this, try to search for recordings on a sample of stations that they are not authorized for to confirm this.
- Be sure that only defined Administrators have administrator level access.

Monitoring the system

Monitor the system status regularly over the first few days of operation to confirm that utilization levels and storage volumes are in line with your expectations. You can reconfigure or add additional storage if necessary.

Appendix A

Appendix A: Troubleshooting

This chapter addresses problems that may be encountered during software installation and configuration. The problems are listed under the following categories:

- Setting the log level
- Administration page access problems
- Search and Replay problems

Additional troubleshooting information is available in the ContactStore for IP Office System Administration Guide.

Setting the log level

You can set the level of messages logged for the ContactStore for IP Office without changing the properties file and restarting the service.

To set the level from the System Administration page, request the URL

<http://mycontactstore:8888/servlet/test?log=DEBUG>

Replace **mycontactstore** with the address of your ContactStore server.

To set it back again, enter the same URL, replacing DEBUG with INFO. The command is case-sensitive.

Using this method changes the log level temporarily; it will revert to normal the next time that the system is rebooted. If you change the log level in the properties file, it remains set to DEBUG which could overflow the disk.

My install CD doesn't autorun in Windows

Use Explorer to view the contents of the CD. Double-click the **setup** icon to start the program.

Administration page access problems

Cannot access the "Login" page

If you cannot access the Administration application, try the following:

- Ping the server to confirm that connectivity is possible. If not, trace the network connections between client and server and double-check the server's IP address, default gateway etc.
- Use the numeric dot notation IP address instead of the hostname. If this works, then the hostname is wrong or cannot be translated by your DNS services.
- Use the browser installed on the server itself to access the application at:

<http://localhost:8888>

If this works, then the problem is in the network between server and client. If it does not work, then the problem may be with the Tomcat web server which runs as a Windows service called 'ContactStore'

- Verify that the MSDE database service is running on the server.

Change Password page appears but not Contents Page

If you managed to set a new password you will need to use this for all subsequent logins, even if you did not reach the main Administration page.

Search and Replay problems

For most problems with Search and Replay, consider the following diagnostic approaches to narrow down the cause of the problem:

- Search for a different call, for example, one that is more recent or older; shorter or longer
- Log in as a different user with different replay restrictions

Specific issues are listed below.

Cannot access the application

If you cannot get to the login page:

- Try accessing the page from a machine on the network that is closer to the ContactStore:
 - On the same LAN if you are having problems with WAN access
 - From the same sub-net if having problems from a different sub-net
 - From the console if having problems from the same sub-net.
- Try using a different browser or a different version of the same browser.
- Try accessing the page from the other side of a firewall.

Problems downloading ActiveX control

If you see error messages relating to ActiveX controls being downloaded-or blocked from being downloaded, your security settings may be too restrictive. See Configuring your browser in Chapter 5 of this guide.

Problems displaying ActiveX control

If the ActiveX control downloads but displays a red cross on white background at top of page, upgrade to Internet Explorer 6.0. These symptoms have been seen on Internet Explorer 5.0.

Cannot log in

If you see the login page but cannot get past it:

- Verify that Caps Lock is off and that you are entering the password with the correct case.
- Log in as a different user
- Confirm the spelling of your log in name with the system administrator and check that your account is still configured in the administration pages.
- Ask the system administrator to reset your password. Log in with a blank password and change your password when redirected to the **Change Password** page.

Search returns no calls

If you get to the search page but no calls are returned when you perform a search:

- Broaden your search criteria to confirm that you can at least find some calls. Start by requesting calls from any parties for today. If that shows no calls, extend the time period. Try setting the date range back to at least the time you know you have seen call records for in the past.
- Check that the system administrator has given you access to the correct calls. Your search and replay restriction may be wrong or too narrow for the search you are attempting.
- Confirm that calls are being recorded. Follow the troubleshooting guidelines for recording problems if you suspect that the system is not actually recording or processing any calls.

Calls listed but cannot play them

If you can see the list of calls that matched your search criteria, but cannot actually play them, look at the area at the top of the browser page where the "graph" of the audio normally shows and match your symptoms to one of the following:

No Audio "graph" - This means that the call has not been retrieved from the recorder or DVD disk or has not reached the client PC.

- Check the server logs for errors.
- Note the call's 15 digit reference number. Search for that .wav file in the /calls path.
- Check connectivity and available bandwidth to the client PC.
- Check the Multimedia on your PC.

Audio graph stops in mid call - This implies that the transfer of data from the ContactStore server to your client PC has been stopped or interrupted.

- Request the same call again. There may have been a temporary network problem.
- Request a different call. If the problem is only with one call, you may have a corrupt file on your hard disk.
- Request the problem call from another PC on the same network. If the other PC can retrieve it successfully, assess the differences between the two client PCs; the problem is most likely at the client end.
- Request the problem call from different sub-nets, ideally working closer to the ContactStore.
- Request the call from the ContactStore server's own browser. If this works and the others don't, then the problem is likely to be in the network between server and clients.

Audio graph appears but no sound - The audio file has reached the client PC successfully; the problem is most likely to be with the PC's multimedia setup or current settings.

- Verify that the PC has a sound card.
- Play a .wav file through Media Player or similar application to verify that the sound card is set up correctly.
- Set any hardware volume and/or mute controls on the speakers/headphones to maximum volume.
- Double-click the icon in the system tray at the bottom right-hand corner of the screen to verify that the PC's software volume controls are not set to mute or very low.
- Ensure you are not running any other programs that may be locking the sound card exclusively. If in doubt, shut down all other programs.
- Try another similar PC. If that works, look for differences in the multimedia setup of the two PCs.

No New Recordings Playable - If you can replay old recordings but not newly made calls, there may be a problem with the recording and/or storage components of the system. Follow these steps:

1. On the System Overview page of the ContactStore Administration application, look at the counts for total calls recorded and calls recorded today.
2. Make a test recording.
3. Complete the recording and hang up.
4. Return to the **System Overview** page and note the **New Total Call Count** and **Daily Call Count**.

These counts should have increased by at least one, the recording that you just made. If the counts have increased, the ContactStore is processing recordings. This is probably a search/replay problem. See earlier sections for help.

If these counts have not increased, the recording has not been successfully compressed and stored on the ContactStore server or inserted into the call details database. Do the following:

- Look for alarm messages that indicate problems with file read/write or rename. The error message should indicate whether disk space or a directory access problem is the cause.
- Check disk space in all partitions. If any of these is less than 50MB, this may be the problem. Check for build up of log files. Check that the call details database hasn't exceeded the available

space. Consider reducing the number of months of calls kept-use the purge settings on the Server configuration page to adjust this.

- Look for alarm messages that indicate licensing problems. The ContactStore will not process any new calls if you are running on a time-expired license. In all cases, you should obtain a new license key.
- Check that the Tomcat server is running - service name 'ContactStore'
- Check for messages in the web log files.
- Reboot the ContactStore server and watch for error messages on startup.

Contacting technical support

If you are having trouble using Avaya software, you should:

1. Retry the action. Carefully follow the instructions in written or online documentation.
2. Check the documentation that came with your hardware for maintenance or hardware-related issues.
3. Note the sequence of events that led to the problem and the exact messages displayed. Have the Avaya documentation available.
4. If you continue to have a problem and you require further support you should make contact with your system maintainer.

Performance figures and data quoted in this document are typical, and must be specifically confirmed in writing by Avaya before they become applicable to any particular order or contract.

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