



# **IP Office 9.0**

## **Installing Contact Recorder for IP Office**

#### Notice

While reasonable efforts have been made to ensure that the information in this document is complete and accurate at the time of printing, Avaya assumes no liability for any errors. Avaya reserves the right to make changes and corrections to the information in this document without the obligation to notify any person or organization of such changes.

For full support, please see the complete document, Avaya Support Notices for Hardware Documentation, document number 03–600759.

For full support, please see the complete document, Avaya Support Notices for Software Documentation, document number 03–600758.

To locate this document on our website, simply go to <http://www.avaya.com/support> and search for the document number in the search box.

#### Documentation disclaimer

“Documentation” means information published by Avaya in varying mediums which may include product information, operating instructions and performance specifications that Avaya generally makes available to users of its products. Documentation does not include marketing materials. Avaya shall not be responsible for any modifications, additions, or deletions to the original published version of documentation unless such modifications, additions, or deletions were performed by Avaya. End User agrees to indemnify and hold harmless Avaya, Avaya's agents, servants and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation, to the extent made by End User.

#### Link disclaimer

Avaya is not responsible for the contents or reliability of any linked websites referenced within this site or documentation provided by Avaya. Avaya is not responsible for the accuracy of any information, statement or content provided on these sites and does not necessarily endorse the products, services, or information described or offered within them. Avaya does not guarantee that these links will work all the time and has no control over the availability of the linked pages.

#### Warranty

Avaya provides a limited warranty on its hardware and Software (“Product(s)”). Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language, as well as information regarding support for this Product while under warranty is available to Avaya customers and other parties through the Avaya Support website: <http://support.avaya.com>. Please note that if you acquired the Product(s) from an authorized Avaya Channel Partner outside of the United States and Canada, the warranty is provided to you by said Avaya Channel Partner and not by Avaya. “Software” means computer programs in object code, provided by Avaya or an Avaya Channel Partner, whether as stand-alone products or pre-installed on hardware products, and any upgrades, updates, bug fixes, or modified versions.

#### Licenses

THE SOFTWARE LICENSE TERMS AVAILABLE ON THE AVAYA WEBSITE, [HTTP://SUPPORT.AVAYA.COM/LICENSEINFO](http://SUPPORT.AVAYA.COM/LICENSEINFO) ARE APPLICABLE TO ANYONE WHO DOWNLOADS, USES AND/OR INSTALLS AVAYA SOFTWARE, PURCHASED FROM AVAYA INC., ANY AVAYA AFFILIATE, OR AN AUTHORIZED AVAYA CHANNEL PARTNER (AS APPLICABLE) UNDER A COMMERCIAL AGREEMENT WITH AVAYA OR AN AUTHORIZED AVAYA CHANNEL PARTNER. UNLESS OTHERWISE AGREED TO BY AVAYA IN WRITING, AVAYA DOES NOT EXTEND THIS LICENSE IF THE SOFTWARE WAS OBTAINED FROM ANYONE OTHER THAN AVAYA, AN AVAYA AFFILIATE OR AN AVAYA AUTHORIZED AVAYA CHANNEL PARTNER; AVAYA RESERVES THE RIGHT TO TAKE LEGAL ACTION AGAINST YOU AND ANYONE ELSE USING OR SELLING THE SOFTWARE WITHOUT A LICENSE. BY INSTALLING, DOWNLOADING OR USING THE SOFTWARE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE INSTALLING, DOWNLOADING OR USING THE SOFTWARE (HEREINAFTER REFERRED TO INTERCHANGEABLY AS “YOU” AND “END USER”), AGREE TO THESE TERMS AND CONDITIONS AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. OR THE APPLICABLE AVAYA AFFILIATE (“AVAYA”).

Avaya grants you a license within the scope of the license types described below, with the exception of Heritage Nortel Software, for which the scope of the license is detailed below. Where the order documentation does not expressly identify a license type, the applicable license will be a Designated System License. The applicable number of licenses and units of capacity for which the license is granted will be one (1), unless a different number of licenses or units of capacity is specified in the documentation or other materials available to you. “Designated Processor” means a single stand-alone computing device. “Server” means a Designated Processor that hosts a software application to be accessed by multiple users.

#### License type(s)

**Designated System(s) License (DS).** End User may install and use each copy of the Software only on a number of Designated Processors up to the number indicated in the order. Avaya may require the Designated Processor(s) to be identified in the order by type, serial number, feature key, location or other specific designation, or to be provided by End User to Avaya through electronic means established by Avaya specifically for this purpose.

**Concurrent User License (CU).** End User may install and use the Software on multiple Designated Processors or one or more Servers, so long as only the licensed number of Units are accessing and using the Software at any given time. A “Unit” means the unit on which Avaya, at its sole discretion, bases the pricing of its licenses and can be, without limitation, an agent, port or user, an e-mail or voice mail account in the name of a person or corporate function (e.g., webmaster or helpdesk), or a directory entry in the administrative database utilized by the Software that permits one user to interface with the Software. Units may be linked to a specific, identified Server.

**Database License (DL).** End User may install and use each copy of the Software on one Server or on multiple Servers provided that each of the Servers on which the Software is installed communicates with no more than a single instance of the same database.

**CPU License (CP).** End User may install and use each copy of the Software on a number of Servers up to the number indicated in the order provided that the performance capacity of the Server(s) does not exceed the performance capacity specified for the Software. End User may not reinstall or operate the Software on Server(s) with a larger performance capacity without Avaya's prior consent and payment of an upgrade fee.

Named User License (NU). You may: (i) install and use the Software on a single Designated Processor or Server per authorized Named User (defined below); or (ii) install and use the Software on a Server so long as only authorized Named Users access and use the Software. "Named User", means a user or device that has been expressly authorized by Avaya to access and use the Software. At Avaya's sole discretion, a "Named User" may be, without limitation, designated by name, corporate function (e.g., webmaster or helpdesk), an e-mail or voice mail account in the name of a person or corporate function, or a directory entry in the administrative database utilized by the Software that permits one user to interface with the Software.

Shrinkwrap License (SR). You may install and use the Software in accordance with the terms and conditions of the applicable license agreements, such as "shrinkwrap" or "clickthrough" license accompanying or applicable to the Software ("Shrinkwrap License").

#### Heritage Nortel Software

"Heritage Nortel Software" means the software that was acquired by Avaya as part of its purchase of the Nortel Enterprise Solutions Business in December 2009. The Heritage Nortel Software currently available for license from Avaya is the software contained within the list of Heritage Nortel Products located at <http://support.avaya.com/LicenseInfo> under the link "Heritage Nortel Products". For Heritage Nortel Software, Avaya grants Customer a license to use Heritage Nortel Software provided hereunder solely to the extent of the authorized activation or authorized usage level, solely for the purpose specified in the Documentation, and solely as embedded in, for execution on, or (in the event the applicable Documentation permits installation on non-Avaya equipment) for communication with Avaya equipment. Charges for Heritage Nortel Software may be based on extent of activation or use authorized as specified in an order or invoice.

#### Copyright

Except where expressly stated otherwise, no use should be made of materials on this site, the Documentation, Software, or hardware provided by Avaya. All content on this site, the documentation and the Product provided by Avaya including the selection, arrangement and design of the content is owned either by Avaya or its licensors and is protected by copyright and other intellectual property laws including the sui generis rights relating to the protection of databases. You may not modify, copy, reproduce, republish, upload, post, transmit or distribute in any way any content, in whole or in part, including any code and software unless expressly authorized by Avaya. Unauthorized reproduction, transmission, dissemination, storage, and or use without the express written consent of Avaya can be a criminal, as well as a civil offense under the applicable law.

#### Virtualization

Each vAppliance will have its own ordering code. Note that each instance of a vAppliance must be separately ordered. If the end user customer or Avaya channel partner would like to install two of the same type of vAppliances, then two vAppliances of that type must be ordered.

Each Product has its own ordering code. Note that each instance of a Product must be separately licensed and ordered. "Instance" means one unique copy of the Software. For example, if the end user customer or Avaya channel partner would like to install two instances of the same type of Products, then two Products of that type must be ordered.

#### Third Party Components

"Third Party Components" mean certain software programs or portions thereof included in the Software that may contain software (including open source software) distributed under third party agreements ("Third Party Components"), which contain terms regarding the rights to use certain portions of the Software ("Third Party Terms"). Information regarding distributed Linux OS source code (for those Products that have distributed Linux OS source code) and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply is available in the Documentation or on Avaya's website at: <http://support.avaya.com/Copyright>. You agree to the Third Party Terms for any such Third Party Components.

#### Note to Service Provider

The Product may use Third Party Components that have Third Party Terms that do not allow hosting and may need to be independently licensed for such purpose.

#### Preventing Toll Fraud

"Toll Fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there can 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 Toll 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 Support website: <http://support.avaya.com>. Suspected security vulnerabilities with Avaya products should be reported to Avaya by sending mail to: [securityalerts@avaya.com](mailto:securityalerts@avaya.com).

#### Trademarks

The trademarks, logos and service marks ("Marks") displayed in this site, the Documentation and Product(s) provided by Avaya are the registered or unregistered Marks of Avaya, its affiliates, or other third parties. Users are not permitted to use such Marks without prior written consent from Avaya or such third party which may own the Mark. Nothing contained in this site, the Documentation and Product(s) should be construed as granting, by implication, estoppel, or otherwise, any license or right in and to the Marks without the express written permission of Avaya or the applicable third party.

Avaya is a registered trademark of Avaya Inc.

All non-Avaya trademarks are the property of their respective owners. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.

#### Downloading Documentation

For the most current versions of Documentation, see the Avaya Support website: <http://support.avaya.com>.

#### Contact Avaya Support

See the Avaya Support website: <http://support.avaya.com> for product notices and articles, or to report a problem with your Avaya product. For a list of support telephone numbers and contact addresses, go to the Avaya Support website: <http://support.avaya.com>, scroll to the bottom of the page, and select Contact Avaya Support.

# Contents

	<b>6. Document History</b>	
	Index .....	67
<b>1. Contact Recorder for IP Office</b>		
1.1 Contact Store for IP Office.....	9	
1.2 Operation Overview.....	10	
1.3 Server Requirements.....	11	
1.4 Additional Documentation.....	12	
1.5 Browser Access .....	13	
1.6 Codecs .....	13	
1.7 Pre-Requisites.....	13	
<b>2. Contact Recorder for IP Office Installation</b>		
2.1 Downloading the Software.....	17	
2.2 Checking the Boot Order.....	18	
2.3 Preparing the Bootable Software Installer.....	18	
2.3.1 Preparing a DVD.....	18	
2.3.2 Preparing a USB2 Installation Key.....	19	
2.4 Server Software Installation.....	20	
2.5 Server Ignition.....	22	
2.6 Logging In.....	25	
2.7 IP Office Licensing.....	26	
2.8 Checking the Voicemail Licenses.....	27	
2.9 Adding the Application Server.....	27	
2.10 Enabling the Contact Recorder for IP Office Service .....	28	
2.11 Logging In to Contact Recorder for IP Office.....	29	
2.12 Setting the File Paths.....	29	
2.13 Configuring the Transfer from Voicemail Pro.....	30	
2.14 Adding Users .....	31	
2.15 Test Operation.....	32	
<b>3. Recording Configuration</b>		
3.1 Configuring the Advice of Call Recording Warning.....	34	
3.2 Configuring the Recording Display.....	34	
3.3 Changing the Recording Length.....	34	
3.4 Configuring Manual Call Recording.....	36	
3.4.1 Configuring the Manual Recording Destination...	36	
3.4.2 Triggering Manual Call Recording.....	37	
3.5 Configuring Automatic Call Recording.....	39	
3.5.1 User Automatic Recording.....	40	
3.5.2 Hunt Group Automatic Recording.....	41	
3.5.3 Incoming Call Route Automatic Recording.....	42	
3.5.4 Account Code Automatic Call Recording.....	43	
3.6 Pausing Recording.....	44	
3.6.1 Configuring a Pause Recording Button.....	44	
3.6.2 Setting the Auto Restart Delay.....	44	
3.7 Customisable Callflow Options.....	44	
<b>4. Additional Processes</b>		
4.1 Enabling DVD Archiving.....	46	
4.1.1 Identifying the Drive Path and UDI.....	46	
4.1.2 Disabling the Media Detection Service.....	47	
4.1.3 Entering the Drive in Contact Recorder for IP Office.....	48	
4.2 Disabling HTTP Access.....	49	
<b>5. License</b>		



# Chapter 1.

# Contact Recorder for IP Office





---

# 1. Contact Recorder for IP Office

The IP Office Voicemail Pro application can be used to manually or automatically record calls. It places those recordings into a user or group's mailbox alongside normal voicemail messages. Users can start manual call recording in a number of ways; programmable button, short code, one-X Portal for IP Office. Automatic call recording is configured on the IP Office system and applied to specific users, hunt groups, incoming call routes or account codes.

Contact Recorder for IP Office enhances call recording by transferring recordings to an separate archive from the normal mailboxes. Those recordings are then outside the control of voicemail housekeeping and do not impact on the space needed for voicemail messages.

Contact Recorder for IP Office maintains a database of the call details associated with each recordings it stores. Using a web browser, users can search the database and, from the search results, they can playback recordings.

For IP Office Release 9.0, IP Office supports Contact Recorder for IP Office with Server Edition servers. Contact Recorder for IP Office runs on an application server separate from the Server Edition Primary Server and Server Edition Secondary Server servers that host the Voicemail Pro application.

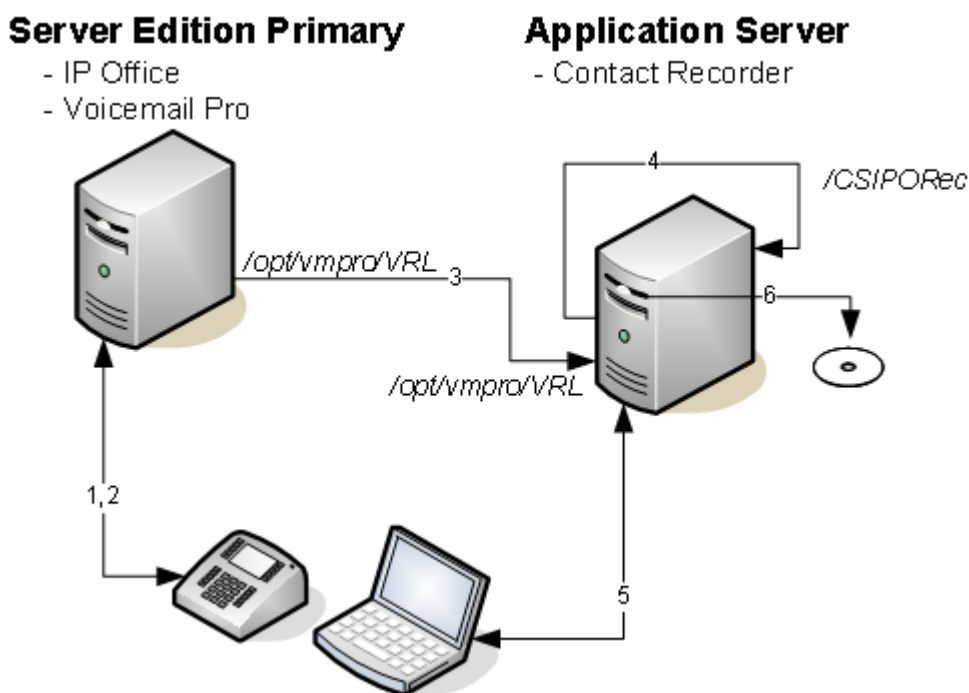
## 1.1 Contact Store for IP Office

Contact Recorder for IP Office is similar in purpose and operation to the Windows based Contact Store for IP Office application also supported by IP Office Release 9.0. Whilst similar, Contact Recorder for IP Office has some additional features not supported by Contact Store for IP Office.

Currently there is no supported upgrade route between Contact Store for IP Office and Contact Recorder for IP Office.

## 1.2 Operation Overview

Contact Recorder for IP Office must use a separate disk partition for file storage from that used by the Voicemail Pro. The easiest way to ensure this is to install each application on separate servers. The diagram below shows the typical operation.



1. The IP Office configuration indicates which calls to record and which of those recordings to send to Contact Recorder for IP Office rather than put into normal voicemail mailboxes.
  - You can configure recording for individual users, hunt groups, incoming call routes or account codes.
  - The IP Office can optionally instruct the voicemail server to record authenticated files. These files are larger than standard recordings. However, authentication allows detection of whether anyone has subsequently modified the file.
2. When a matching call occurs, the Voicemail Pro performs the actual recording.
3. When recording is complete, the voicemail server transfers the files from its temporary folder to a similar temporary folder on the Contact Recorder for IP Office application server.
4. The Contact Recorder for IP Office collects any file that appears in its server's temporary folder. It adds the recording file to its storage folder and adds the file and call details to its searchable database.
5. Users are able to browse to the Contact Recorder for IP Office server and search the database to replay archived recordings.
  - Users can search for calls based on date, length, parties involved, call direction and call target.
  - Each user can be restricted to only seeing calls that include particular extensions ranges.
  - Optionally, users can download and email copies of recordings from the search results.
6. By default, Contact Recorder for IP Office stores call recordings indefinitely and keeps call details in its database for 5 years. However, when space on the existing storage partition becomes limited, it starts deleting recordings on a first in first out basis. To avoid this, you can configure long term storage onto DVD+RW disc, Blue Ray -R disc or network attached storage to free up space for newer recordings.

## 1.3 Server Requirements

The following are the minimum server PC requirements.

- **IMPORTANT: Compatible Servers**

Avaya cannot guarantee the compatibility of any particular server PC for the operating system. It is the installer's responsibility to ensure that the server platform is compatible. A list of tested servers is available at <https://hardware.redhat.com/>. The servers used by Avaya for product testing are:

- HP ProLiant DL160
- Dell Optiplex 780MT

	Minimum Specification	Recommended Specification
<b>Processor</b>	Intel 64-bit Dual Core 2.4GHz	Intel Pentium 64-bit Quad Core 2.4GHz or AMD Athlon 64 4000 + or equivalent.
<b>RAM Memory</b>	4GB	4GB
<b>Hard Disk Space</b>	30GB	30GB.  Contact Recorder for IP Office typically requires 60KB per minute for non-authenticated files and 120KB per minute for authenticate files.  Contact Recorder for IP Office also reserves 1GB of space for the call details database and other operations.

- **Operating System**

The IP Office Application Server installs a Linux operating system, replacing any existing operating system on the PC.

- **Drives**

DVD Drive for software installation. For Contact Recorder for IP Office, a DVD+RW or Blue Ray -R disc drive is recommended.

- **Other Requirements:**

- The server PC must be configurable to boot from DVD or USB in order to overwrite any existing OS. This may require access to the BIOS in order to change the boot order of the PC.
- The IP Office Application Server operates as a headless server, i.e without requiring any keyboard, video and mouse (KVM) connections after initial installation. Users and maintainers access the server remotely from other PCs.

---

## 1.4 Additional Documentation

In addition to reading this manual, you should also have, have read and be familiar with the following manuals before attempting to install a IP Office Application Server system.

### Related Documents

- **one-X Portal for IP Office Administration Manual**  
This manual covers the installation and administration menus used for the one-X Portal for IP Office application. This manual is essential if the one-X Portal for IP Office needs configuring to support multiple IP Office servers in a Small Community Network.
- **Voicemail Pro Installation Manual**  
This manual covers scenarios including multiple servers within a Small Community Network.
- **Voicemail Pro Administration Manual**  
By default the voicemail server provides mailbox services to all users and hunt groups without any configuration. This manual covers the administration of the voicemail server using the Voicemail Pro client in order to enable additional features.
- **IP Office Manager Manual**  
IP Office Manager is the application used to configure the IP Office application. This manual details how to use IP Office Manager and the full range of IP Office configuration settings.
- **Contact Recorder for IP Office Installation**  
Covers the additional steps required for installation and basic operation of the Contact Recorder for IP Office application.
- **Administering Contact Recorder for IP Office**  
Administration and operation of the optional Contact Recorder for IP Office service.
- **Using Contact Recorder for IP Office**  
Covers the use of Contact Recorder for IP Office.

### Technical Bulletins

Avaya provide a technical bulletin for each releases of IP Office software. The bulletin details changes that may have occurred too late to be included in this documentation. The bulletins also detail the changes in the software release compared to previous releases and any specific actions required or restrictions that apply if upgrading from a previous release.

### Other Documentation and Documentation Sources

All the documentation for IP Office systems is available from the following web sites:

- **Avaya Support Web Site** - <http://support.avaya.com>
- **Avaya IP Office Knowledge Base** - <http://marketingtools.avaya.com/knowledgebase>

## 1.5 Browser Access

The default paths for browser access are *http://<server\_address>:9888* and *https://<server\_address>:9444*. Users created in the Contact Recorder for IP Office configuration have roles that define the actions they can perform after logging in.

Contact Recorder for IP Office supports Microsoft Internet Explorer 8, 9 or 10. The playback function requires the browser to allow the download and installation of a number of ActiveX controls.

Contact Recorder for IP Office users with the appropriate permission can also download copies of call recordings from the browser.

## 1.6 Codecs

The IP Office configuration sets the destination for call recordings. The destination selected affects the codec used for the initial recording and the codec applied to the final recording file. The IP Office options are:

- **Mailbox**  
This is the default option. When selected, you can use the adjacent drop down list to select the destination user or hunt group mailbox. These files are typically 1MB per minute.
- **Voice Recording Library**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.711 format file that Contact Recorder for IP Office converts to G.729A format after the file transfer. These files are typically 60KB per minute.
- **Voice Recording Library Authenticated**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.726 format file that contains file authentication information. Any subsequent editing of the file invalidates that information. Contact Recorder for IP Office does not convert the file to G.729A format after the file transfer. These files are typically 120KB per minute.

## 1.7 Pre-Requisites

You must meet the following conditions before attempting to install Contact Recorder for IP Office.

1. Do not install and configure Contact Recorder for IP Office until after normal voicemail mailbox operation of the Voicemail Pro application has been tested and validated. The Voicemail Pro performs the call recording for Contact Recorder for IP Office and so is an essential pre-requisite.
2. For Server Edition, the primary server needs a **VMPro Recordings Administrators** license. For IP Office Release 9.0, this is the only server in the Server Edition network that requires a license.
3. The Contact Recorder for IP Office application must use a separate disk partition for file storage from Voicemail Pro. The documented method to do this is to install Contact Recorder for IP Office on a separate server. It is acceptable to install one-X Portal for IP Office and Contact Recorder for IP Office on the same server.



# Chapter 2.

# Contact Recorder for IP Office Installation

---

## 2. Contact Recorder for IP Office Installation

This section details the processes required for Contact Recorder for IP Office installation.

### Process Summary

The installation process divides into 4 main stages.

#### 1. Application Server Installation

This stage follows the standard installation process for an application server. For full details, refer to the IP Office Application Server Installation Manual.

- a. [Downloading the software](#) <sup>[17]</sup>  
Download the latest application software and related files.
- b. [Check the server boot order](#) <sup>[18]</sup>  
Check that the server PC can boot from DVD or USB.
- c. [Preparing a bootable software installer](#) <sup>[18]</sup>  
Create a bootable DVD or USB2 memory key.
- d. [Server software installation](#) <sup>[20]</sup>  
Install the application server software.
- e. [Server ignition](#) <sup>[22]</sup>  
Configure the server's role.
- f. [Logging in](#) <sup>[25]</sup>  
Log in to the server's IP Office Web Manager menus.

#### 2. Contact Recorder for IP Office

This stage enables the call recording functionality of the Voicemail Pro and starts the Contact Recorder for IP Office service.

- a. [IP Office Licensing](#) <sup>[26]</sup>  
Enter the licenses to support use of Contact Recorder for IP Office.
- b. [Checking the voicemail licensing](#) <sup>[27]</sup>  
Check that the voicemail server has detected the licenses.
- c. [Adding the application server](#) <sup>[27]</sup>  
Add the application server to the Server Edition Primary Server IP Office Web Manager view of available servers.
- d. [Installing the Contact Recorder for IP Office service](#) <sup>[28]</sup>  
Install and start the Contact Recorder for IP Office service on the application server.

#### 3. Configuring Contact Recorder for IP Office

This stage configures the handling and access to call recordings.

- a. [Logging in to Contact Recorder for IP Office](#) <sup>[29]</sup>  
Log in to Contact Recorder for IP Office to perform basic initial configuration.
- b. [Setting the file paths for recordings](#) <sup>[29]</sup>  
Set and check the files paths on the application server from which Contact Recorder for IP Office will collect recording files and into which it will store those files.
- c. [Configuring the transfer of recordings](#) <sup>[30]</sup>  
Configure the voicemail server so that it can transfer recording files to the application server for collection.
- d. [Add users](#) <sup>[31]</sup>  
Add user to Contact Recorder for IP Office for the playback of recordings.

#### 4. Test operation <sup>[32]</sup>

Test operation to verify the basic installation.



## 2.1 Downloading the Software

Avaya makes IP Office Application Server software for each IP Office release available from the Avaya support website (<http://support.avaya.com>) in a number of formats. For Unified Communications Module installation, you must download the ISO file and UNetBootin software.

- **ZIP File**

You can use this type of file to upgrade within an existing release. For example, to upgrade a server running 9.0 (x) to 9.0(y). The ZIP file contains RPM files that the module extracts after uploading the ZIP file.

- **! Upgrade Warning**

Before using any upgrade, refer to the IP Office Technical Bulletin for the IP Office release to confirm that Avaya supports the upgrade path. Some releases include changes that require additional steps.

- **! Backup Application Data**

In all cases, always backup all application data to a separate location before upgrading.

- **ISO File**

You can use this type of file to reinstall the full set of software including the operating system. Before using an ISO file, you must backup all applications data.

- **Source ISO File**

Some components of the software are open source. To comply with the license conditions of that software, Avaya are required to make the source software available. However, this file is not required for installation.

- **RPM Files**

Occasionally Avaya may make separate RPM files available. It uses these to upgrade individual software components on the module. RPM files install in the same way as a ZIP file.

- **UNetBootin software**

This additional software is downloadable from <http://unetbootin.sourceforge.net>. You use it to load an .iso image onto a USB memory key from which the server can boot.

### To download software:

1. Browse to <http://support.avaya.com> and log in.
2. Select **Downloads & Documents**.
3. In the **Enter Your Product Here** box, enter **IP Office**.
4. Use the **Choose Release** drop-down to select the required IP Office release.
5. If shown, click **View downloads >**.
6. The resulting page lists the files available for download. Select the file to download.
7. Click **View documents >**.
8. Select the **Technical Tips** checkbox.
9. In the list of documents, download the IP Office Technical Bulletin for the IP Office release.

---

## 2.2 Checking the Boot Order

You install the software by placing it onto a DVD or USB2 memory key from which the server PC then boots. The normal default for servers is to boot from CD/DVD drive and, if unsuccessful, then boot from the first hard disk. This boot order is set in the BIOS settings of the server PC.

In order to add other devices to the list of those from which the server can boot or to change the order of usage, you need to change the server's BIOS settings. The method of accessing the BIOS varies between servers. Refer to the PC manufacturer's documentation.

- Typically, an option to access the BIOS settings of a server is displayed briefly when the server PC is started. For example "Press Del for setup" indicates that the server BIOS is accessed by press the Delete key while the message is displayed. This option is only available for a few seconds whilst the existing BIOS settings are loaded, after which the server looks for and begins to load boot software if it finds a boot source, for example existing boot software on its hard disk.
- Once the PC displays its BIOS settings, the normal boot up process stops. The BIOS settings typically consist of several pages. The settings for the order in which the server looks at different devices for a boot software source are normally set on the **Advanced BIOS Features** page.
- To boot from a DVD, ensure that the server's DVD drive is set as the boot device used before the server's hard disk.
- To boot from a USB2 memory key, set a USB option as the boot device used before the server's hard disk. Depending on the BIOS, there may be multiple USB options. Select **USB-FDD**.
- The server's hard disk must remain in the list of boot devices. The server boots from the hard disk after the software installation.

## 2.3 Preparing the Bootable Software Installer

You can install the server software from either a DVD or a USB2 memory key. If not installing from an Avaya supplied DVD, you must download an ISO file from Avaya and use that to create the bootable DVD or USB2 memory key.

### 2.3.1 Preparing a DVD

To install from a DVD, you need to burn the .iso image file of the installation software onto a bootable DVD. The exact process for that depends on which software you use for the burning process. However, the following general recommendations apply:

- Do not use reusable DVDs.
- Burn the DVD at a slow speed such as 4x.

## 2.3.2 Preparing a USB2 Installation Key

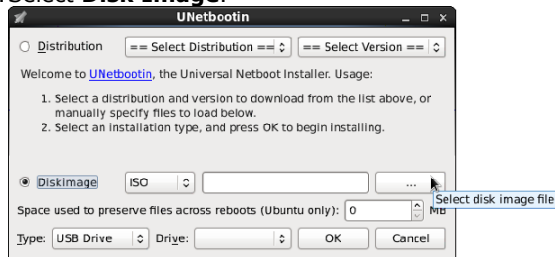
This process uses a downloaded ISO file to create a bootable USB2 memory key for software installation. Using this device installs the software, overwriting any existing software and data on the server.

### Prerequisites

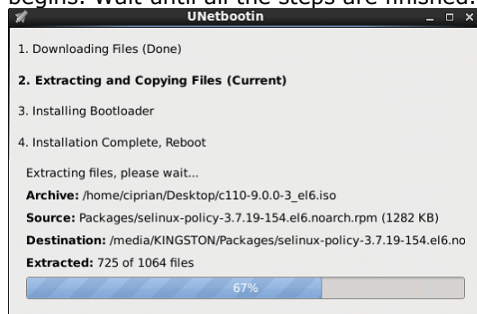
- **8GB USB2 Memory Key**  
Note that all existing files on this device will be erased.
- **UNetbootin software**  
This additional software is downloadable from <http://unetbootin.sourceforge.net>. You use it to load an .iso image onto a USB memory key from which the server can boot.
- **IP Office Application Server ISO File**  
You can download this software from the Avaya support website (<http://support.avaya.com>).

### To create a bootable USB2 memory key:

1. Erase all files on USB2 memory key and reformat it as a FAT32 device.
2. Start the **unetbootin** application.
3. Select **Disk Image**.



4. Click the **...** browse button and select the ISO file.
5. Click **OK**. If a warning appears announcing that all data from the USB2 memory key will be lost, click **Yes** to all. The process of transferring files from the ISO image to the USB2 memory key and making that device bootable begins. Wait until all the steps are finished.



6. When the process has ended, click **Exit**. Do not click **Reboot now**.
7. Using the file explorer, open the USB folder on the USB2 memory key.
8. Select the file **sylinux.cfg** and copy it to the top level (root) folder, overwriting any existing file with that name.
9. Remove the USB2 memory key from the PC. The device is ready for use for full software installation.

---

## 2.4 Server Software Installation

This process installs the Linux operating system onto the server and the Linux based applications. This installation process requires approximately 1 hour.

### To install the server software from a bootable device:

1. Depending on the chosen method of installation:
  - If installing from a DVD, immediately after powering up the PC, insert the DVD into the DVD drive.
  - If installing from a USB2 memory key, insert the USB2 memory key into the first USB port and apply power to the PC.
2. The PC should boot and display the first IP Office Application Server installation screen.
  - If installing from a DVD and the PC does not boot from the DVD, the boot order of the server PC may need to be changed.
  - If installing from a USB2 memory key and the PC does not boot from the USB2 memory key:
    - if the server has several USB ports, reboot with the USB2 memory key in another one of the ports.
    - the boot order of the server may need to be changed. See Checking the Boot Order.
3. The installer prompts whether it should check the installation media. Checking a DVD takes approximately 10 minutes.
  - a. To skip the media check, select **Skip**.
  - b. To proceed with a media check, select **OK**. When the check has completed, the installer provides options to check any other media, for example the TTS language DVDs.
4. Select the language that you want used for the installation process. Click **Next**.
5. Select the keyboard that matches the one you are using. Click **Next**.
6. Read the license agreement. If you accept the license agreement, click **Yes** and then click **Next**.
7. An upgrade menu appears if a previous release is already installed on the server. It details the existing installed options and the new installable options. Select either **Install** or **Upgrade** and click **Next**.
  - **Install**  
This option overwrites the existing installation including any customer data.
  - **Upgrade**  
This option upgrades the existing application and retains the existing customer data.
8. If you selected **Install**, the installer asks you to confirm the process. Select the required option and click **Next**.
  - **Yes**  
If selected, the installation process continues, formatting the whole drive for its use.
  - **No**  
If selected, the install process offers to shutdown the server. Either remove the device from which you were booting to allow the server to restart normally or allow the installation process to start again.
  - **Advanced**  
If selected, during the installation process you can select adjust the hard disk partitioning. However, if used, the installer does not display the **Upgrade** option (see Step 7) when booting from an ISO in future.
9. If you selected **Install**, continue below. If you selected **Upgrade**, go to step 11.
  - a. Set the host name for the server to use.
  - b. Click **Configure Network**.
    - a. Select the wired Ethernet connection that is being used (this is likely to be **eth0**) and click **Edit**.
    - b. Select the **IPv4 Settings** tab.
    - c. To change the address shown, click on the address and change the settings.
    - d. When finished setting the IP address details for the server, click **Apply**. Click **Close**. Click **Next**.
  - c. Enter and confirm the password for the root administrator account. This is the root user password for access to the operating system. Ensure that you note the password set.
  - d. Click **Next**. Click **Next** again.
  - e. A menu for partitioning the server appears if you selected **Advanced** during step 8 above. The menu allows various options for partitioning of the server hard disk. However, if used, the installer does not display the **Upgrade** option (see Step 7) when booting from an ISO in future.
10. The process for formatting the disk starts. This runs for a couple of minutes.

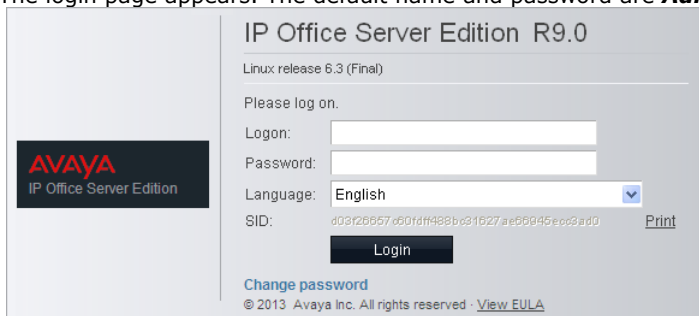
11. The installer prompts you that it is about start installation of the software. Click **Next** to start.
12. When installation is complete, click **Next**.
13. Remove the DVD or USB2 memory key and then select **Reboot**.
14. Following the reboot, the server displays the address details for further configuration of the server. Use the address to start the server ignition process.

## 2.5 Server Ignition

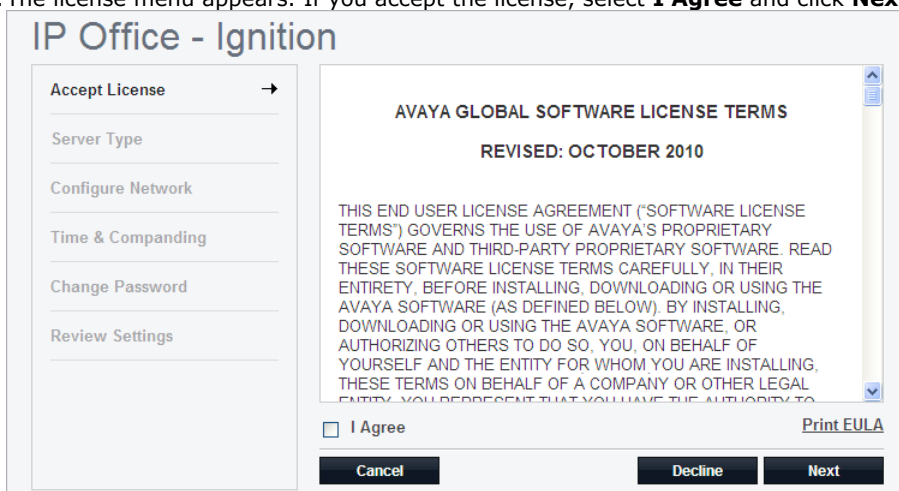
Following installation, you must ignite the server. You do this by web browser access to the server.

### To start server ignition:

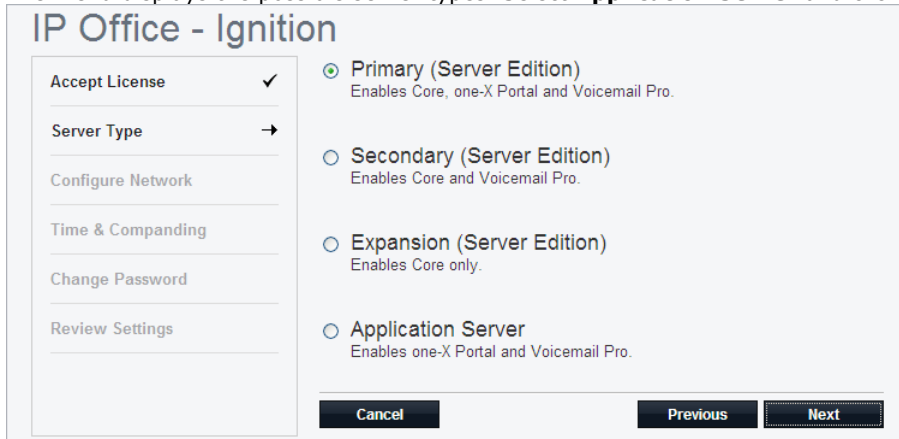
1. From a client PC, start the browser and enter **https://** followed by the IP address of the server and **:7071**. For example **https://192.168.42.1:7071**.
2. The login page appears. The default name and password are **Administrator** and **Administrator**.



3. Click **Login**.
4. The license menu appears. If you accept the license, select **I Agree** and click **Next**.



5. The menu displays the possible server types. Select **Application Server** and click **Next**.



6. Check and if necessary change the network settings for the server. Click **Next**.

The screenshot shows the 'Avaya IP Office Application Server' configuration window. On the left is a sidebar with options: 'Accept License' (checked), 'Server Type' (checked), 'Configure Network' (selected with a right arrow), 'Time & Companding', 'Change Password', 'Configure Services', and 'Review Settings'. The main area is titled 'Network interface: eth0' and contains three sections:
 

- Assign IP Address:** 'Automatic (DHCP)' is unchecked. 'IP Address' is set to '192.168.0.214' and 'Netmask' is '255.255.255.0'.
- Assign System Gateway:** 'Gateway' is set to '192.168.0.1'.
- Assign System DNS Servers:** 'Automatic (DHCP)' is unchecked. 'Primary DNS' and 'Secondary DNS' are empty fields.

 At the bottom, 'Hostname' is set to 'techpubs'. There are 'Cancel', 'Previous', and 'Next' buttons at the bottom right.

7. Set the time source for the server.

The screenshot shows the 'Avaya IP Office Application Server' configuration window. The sidebar is the same as in the previous step, but 'Time & Companding' is now selected with a right arrow. The main area is titled 'Avaya IP Office Application Server' and contains:
 

- Use NTP:** Checked.
- NTP Server:** '0.pool.ntp.org'
- Date/Time:** '2013-02-28 / 10 : 34'
- Timezone:** 'Europe/London' (dropdown menu)

 Below this is a message box: 'Companding settings not available for the currently selected server type.' At the bottom are 'Cancel', 'Previous', and 'Next' buttons.

- Set the current time and date for the server or select to use the time provided by an NTP server.

8. Click **Next**. Enter and confirm a new password. This is the root user password for access to the Linux operating system. Ensure that you note the password set.

The screenshot shows the 'Avaya IP Office Application Server' configuration window. The sidebar is the same as in the previous steps, but 'Change Password' is now selected with a right arrow. The main area is titled 'Avaya IP Office Application Server' and contains:
 

- A message: 'It is strongly recommended that you change the root password.'
- Two radio buttons: 'Use existing password' (unchecked) and 'Change password' (checked).
- New Password:** and **New Password (verify):** are empty input fields.
- Password complexity requirements:**
  - must contain at least 8 characters.
  - maximum character sequence length must be 4.

 At the bottom are 'Cancel', 'Previous', and 'Next' buttons.

9. Select which applications should start automatically. Unselected services remain installed but not running unless manually started. If the intention is to also run Contact Recorder for IP Office on the application server, do not select Voicemail Pro.

10. Click **Next**. Check the displayed summary and use the **Previous** and **Next** options to readjust settings if necessary.

11. Click **Apply**. Click **OK** when displayed to access the server's web manager menus.

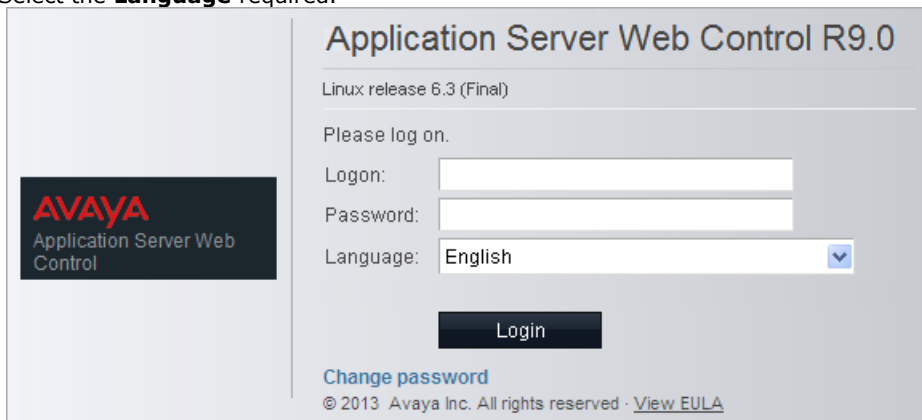


## 2.6 Logging In

Administration of the server uses a web browser.

### To log in to the server's web control menus:

1. From a client PC, start the browser. Enter **http://** followed by the address of the IP Office Application Server and **:7071**.
2. Select the **Language** required.



3. Enter the name and password for IP Office Application Server administration. The default name and password are **Administrator** and **Administrator**. To change the password, select the **Change Password** option.
4. If the login is successful, the server's **System** page appears.

---

## 2.7 IP Office Licensing


To support the call recording by an IP Office system, the IP Office's configuration must include a **VMPRO Recordings Administrators** license. For IP Office Release 9.0 and higher on Server Edition, only the Server Edition Primary Server requires a license.

Avaya base each license on the unique **System Identification** of the server. Therefore, you cannot use the license from one server on another server.

### To check a server's System Identification:

1. Start IP Office Manager and load the configuration from the primary server.
2. Select **Configuration**.
3. The Server Edition summary includes the **System Identification** of each server. Check that these match the values used for issuing the licenses.

### To add a license:

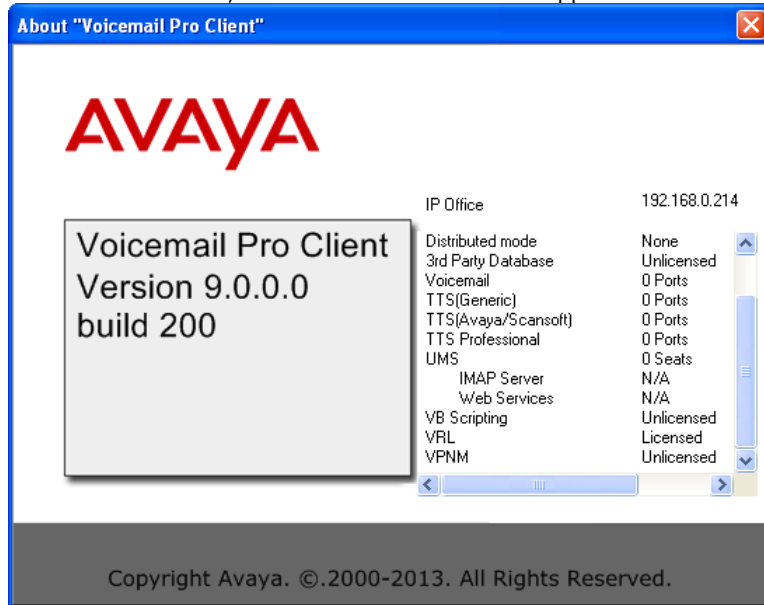
1. Start IP Office Manager and load the configuration from the primary server.
2. For each server that requires call recording:
  - a. In the navigation tree, expand the details of the server and select **License**.
  - b. Click **Add**.
  - c. Enter the supplied license for the system and click OK.
  - d. The license **Feature** should list **VMPRO Recordings Administrator**. The **Status** should show **Unknown**.
  - e. Repeat this process for any other servers licensed.
3. Click  to save the configuration file
4. Close and then reload the configuration.
5. Check that the **Status** of the licenses has now changed to **Valid**.

## 2.8 Checking the Voicemail Licenses

The licenses entered in the IP Office system configurations enable various features including optional voicemail features. Using the Voicemail Pro client, you can check the features licensed for the voicemail server. The feature required for Contact Recorder for IP Office is support of **VRL** (Voice Recording Library).

### To check the voicemail licenses:

1. Login to the voicemail server using the Voicemail Pro client.
2. Click **Help | About**.
3. In the details shown, check that the **VRL** feature appears **Licensed**.



## 2.9 Adding the Application Server

The application server is not automatically included in the list of servers shown by IP Office Web Manager.

### To add the application server to the solution menu:

1. Login to the Server Edition Primary Server server's web manager menus at [https://<server\\_address>:7070](https://<server_address>:7070).
2. From the **Solution Settings** drop-down list, select **Application Server**.
3. Enter the IP address of the Contact Recorder for IP Office application server.
4. Click **OK**.
5. The application server should now appear in the list of servers.

---

## 2.10 Enabling the Contact Recorder for IP Office Service

The application server installation includes the component for Contact Recorder for IP Office but does not automatically install and enable the component.

### To enable the Contact Recorder for IP Office application:

1. Login to the primary server's web manager menus.
2. Click **Platform**.
3. Select the application server from the list of servers and click **Launch in new tab**.
4. Select the **Updates** tab.
5. In the list of services, locate the **Application** named **Contact Recorder**. The status should show *not installed*.
6. Click **Install**.
7. Select the **System** tab.
8. The list of services now includes **Contact Recorder**. Check that the automatic start check box is selected and that the application has started. Click **Start** if necessary.
9. Check that the **Voicemail** application is stopped and is not set to automatically start.

## 2.11 Logging In to Contact Recorder for IP Office

Contact Recorder for IP Office supports Microsoft Internet Explorer 8, 9 or 10. The playback function requires the browser to allow the download and installation of a number of ActiveX controls.


### To log in to Contact Recorder for IP Office:

1. Start a web browser and enter the address for Contact Recorder for IP Office application server.
  - For secure access, enter `https://<server_address>:9444`.
  - For unsecure access, enter `http://<server_address>:9888`.
2. Enter your user name. The default user name for administration is **Administrator**.
3. Enter your password. For the **Administrator**, the default password is blank.
4. Click **OK**.
  - a. When logging in for the first time, the system prompts you to change your password.
  - b. Enter the existing password and a new password.
  - c. Click **OK**.
5. The menus displayed depend on the role assigned to the user name by the administrator.

## 2.12 Setting the File Paths

Contact Recorder for IP Office uses two key file paths, one for collecting recordings and one for storing those recordings.

### To check the file transfer and storage addresses:

1. Login to Contact Recorder for IP Office as an administrator.
2. Select  **General Setup**.
3. Check the **Handover Folder** setting. The default should be `/opt/vmpro/VRL`. This is the folder to which the voicemail server should send recordings. See [Configuring the Transfer of Recordings](#) <sup>[30]</sup>.
4. Check the **Call storage path** setting. The default should be `/CSIPORec`. This is the default folder created during the application server installation for Contact Recorder for IP Office to use for recordings.
5. If you change either path, you must restart the Contact Recorder for IP Office service. See below.

### To restart the Contact Recorder for IP Office service:


1. Login to the primary server's web manager menus.
2. Click **Platform**.
3. Select the application server from the list of servers and click **Launch in new tab**.
4. Select the **System** tab.
5. For the **Contact Recorder** application, click **Stop**.
6. Wait until the service appears as *stopped*. Click **Start**.

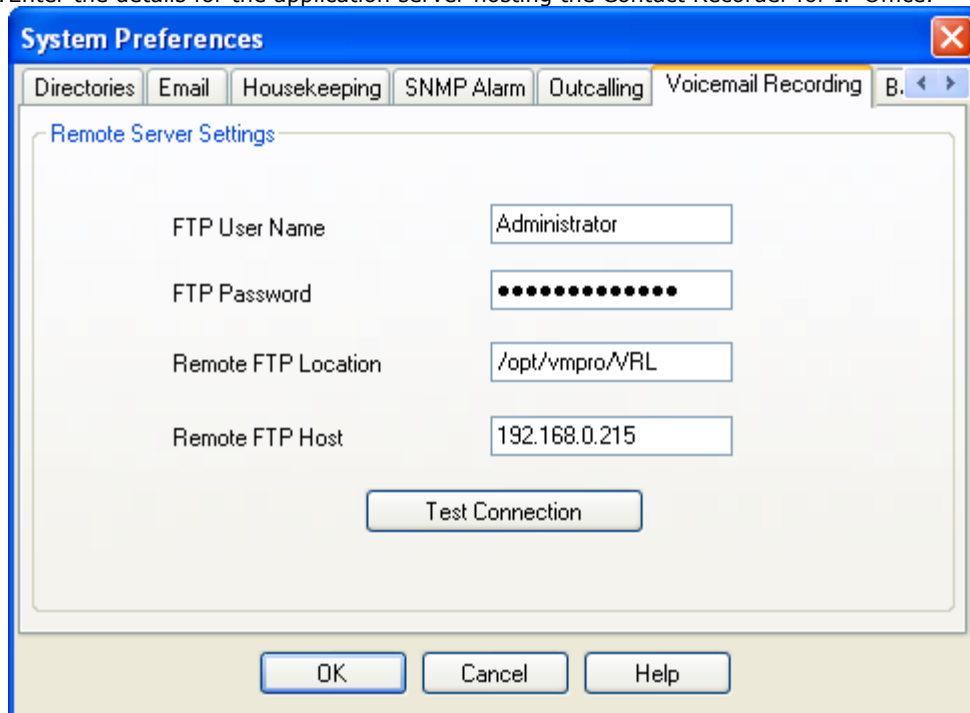
## 2.13 Configuring the Transfer from Voicemail Pro

You need to configure the voicemail server on the Server Edition Primary Server to transfer any files in its */opt/vmpro/VRL* folder to the same location on the Contact Recorder for IP Office application server.

If the Server Edition network includes a backup voicemail server on a Server Edition Secondary Server, that backup voicemail server does not require any direct configuration. It receives a copy of all the settings from the primary voicemail server including the settings below for transferring recordings to the Contact Recorder for IP Office.

### To setup and test the transfer of recordings:

1. Login to the voicemail server using the Voicemail Pro client.
2. Click the  **Preferences** icon and select **General**.
3. Select the **Voice Recording** tab.
4. Enter the details for the application server hosting the Contact Recorder for IP Office.




- **FTP User Name / FTP Password**  
Enter the details of a user account with read-write permissions for the folder (configured below) on the application server. The default is to use the application server's **Administrator** account.
- **Remote FTP Location**  
Enter the location on the application server hosting that Contact Recorder for IP Office checks for new transferred recordings (see [Setting the File Paths](#) <sup>29</sup>). The default location is */opt/vmpro/VRL*.
- **Remote FTP Host**  
Enter the IP address or fully qualified domain name of the application server hosting Contact Recorder for IP Office.

5. Click **Test Connection**.
6. Click **OK**.

## 2.14 Adding Users

Users for Contact Recorder for IP Office are configured either directly in Contact Recorder for IP Office or via using Windows domain authentication. For the later, refer to the Contact Recorder for IP Office Administering Contact Recorder for IP Office manual. The example below is only for adding a user directly into the Contact Recorder for IP Office configuration.

### To add additional users:

1. Login to Contact Recorder for IP Office as an administrator.
2. Select  **System**.
3. Click **Add user**.

Username	<input type="text"/>
Password	<input type="password"/> <small>You must set a temporary password for a new account and may set one for an existing account. The user will be forced to change it when they log in.</small>
Comment (optional)	<input type="text"/>
Roles	<input type="checkbox"/> System Admin. <input type="checkbox"/> Restricted Admin. <input type="checkbox"/> May export recordings as files
Is allowed to replay calls owned by	<input type="text"/> <small>Use commas to separate station numbers and dashes to indicate ranges e.g. 1000,1030-1049,2001</small>
<input type="button" value="Close Window"/> <input type="button" value="Enter and Stay Open"/> <input type="button" value="Enter"/>	

- **Username**  
Enter a user name for the user's account.
- **Password**  
Enter a password of at least 8 characters (the default setting). This is only a temporary password. When the user logs in using this password, the system prompts them to set a new password.
- **Roles**  
The selected role for the user affects which menus they can access when logged in to Contact Recorder for IP Office. Users with no admin role only see the menus for searching for recordings.
  - **System Admin**  
This type of user has full access to the application settings.
  - **Restricted Admin**  
This type of user can see the system status and alarms; eject DVDs and administer non-admin user accounts. They cannot change the system configuration settings.
  - **May export recordings as files**  
If selected, the user is able to export recordings from the search results rather than just replay.
- **Is allowed to replay calls owned by**  
Use this field to enter the list of extensions that the user is allowed to search for and replay recordings. Enter a comma-separated list of individual station or agent numbers. You can also use a hyphen to separate the ranges. 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 that the number of digits is important. For example, giving a user rights over 0000-9999 does not give them rights over any 2, 3, or 5 digit numbers. Some typical examples are:
  - **4000**  
This user can only replay calls involving extension 4000. This is a typical entry for entry for someone to only be able to replay their own recordings.
  - **4000-4019**  
This user can only replay calls involving extensions in the range 4000 to 4019. This is a typical entry for a supervisor of a group of agent with those numbers.
  - **4000,4003,4010-4019,4124-4128**  
This user can replay calls involving a more complex range of numbers. This is a typical entry for a supervisor where the originally assigned numbering plan has grown over time.

---

- **1000-9999**

This user can replay any calls with a 4-digit extension number. This is a typical entry for a senior manager with search and replay rights over all recordings.

4. If you want to add multiple users, click **Enter and Stay Open**, otherwise click **Enter**.

## 2.15 Test Operation

Before proceeding any further, test basic call recording operation.

### To test operation:

1. Create a test user in Contact Recorder for IP Office who has playback right for your test extension. See [Adding Users](#)<sup>[31]</sup>.
2. Using IP Office Manager, configure automatic call recording of the test extension user's internal calls. See [User Automatic Recording](#)<sup>[40]</sup>.
3. Make a test call from that user. You should hear the advice of call recording warning. See [Configuring the Advice of Call Recording Warning](#)<sup>[34]</sup>.
4. Wait a minute for the call recording to transfer from the voicemail server to the Contact Recorder for IP Office application server.
5. Log in to Contact Recorder for IP Office as the test user. Search for the recording.



# **Chapter 3.**

# **Recording Configuration**

---

## 3. Recording Configuration

This section covers configuration of which calls the system records.

### Processes:


- [Configuring the advice of call recording warning](#) <sup>[34]</sup>
- [Configuring the recording display](#) <sup>[34]</sup>
- [Changing the maximum recording length](#) <sup>[34]</sup>
- [Configuring manual call recording for users](#) <sup>[36]</sup>
- [Configuring automatic call recording](#) <sup>[39]</sup>
  - [To configure automatic user recording](#) <sup>[40]</sup>
  - [To configure automatic hunt group recording](#) <sup>[41]</sup>
  - [To configure incoming call route recording](#) <sup>[42]</sup>
  - [To configure account code recording](#) <sup>[43]</sup>

### 3.1 Configuring the Advice of Call Recording Warning

In many locations, it is a local or national requirement to warn all parties involved in a call about call recording.

- The voicemail server provides an advice of call recording warning by default.
- If any other party joins the call after it starts, for example in a conference call, the advice of call recording warning repeats each time a new party joins the call.
- For each language installed on the voicemail server, the server uses the file named **aor\_00.wav** to provide the warning.
- Analogue trunks do not support call status signaling. Since the advice of recording warning plays as soon as the trunk, even if the remote end is still ringing, the called party may not always hear the warning.


#### To switch the advice of call recording warning on or off:

1. From the Voicemail Pro client, click  or select **Administration > Preferences > General**.
2. Click **Play Advice on Call Recording** to switch this option on (checked) or off (unchecked).
3. Click **OK**.
4. Click **Save & Make Live**.

### 3.2 Configuring the Recording Display

Some Avaya terminals display **REC** when involved in a recorded call.


#### To hide the auto record indication

1. Open the system configuration in IP Office Manager.
2. In the navigation pane, click  **System**.
3. Click the **Voicemail** tab.
4. Check **Hide auto recording**. This hides the display of **REC** of phones that support that feature when recording a call.
5. Save the configuration back to the IP Office system.

### 3.3 Changing the Recording Length

The maximum length of call recordings made by Voicemail Pro is adjustable.

#### To change the recording length:

1. Start the Voicemail Pro client and connect to the voicemail server.
2. Click  or select **Administration > Preferences > General**.
3. The **Max. VRL Record Length (secs)** setting sets the maximum length for recordings. The maximum setting is 3600 seconds (60 minutes).

4. Click **OK**.
5. Click **Save & Make Live**.

## 3.4 Configuring Manual Call Recording

You can configure Contact Recorder for IP Office as the destination for call recordings manually triggered by a user.

- [Configuring the manual recording destination](#)<sup>[36]</sup>
- [Triggering manual call recording](#)<sup>[37]</sup>
  - [Using IP Office SoftConsole](#)<sup>[37]</sup>
  - [Using a programmable button](#)<sup>[38]</sup>
  - [Using a short code](#)<sup>[38]</sup>

### 3.4.1 Configuring the Manual Recording Destination

By default user's can use manual call recording at any time. They do this using a variety of methods for [triggering manual call recording](#)<sup>[37]</sup>. To use manual call recording with Contact Recorder for IP Office, you must change the destination of the recording.

#### To configure a user's recording options:

1. Start IP Office Manager and load the configuration from the primary server.

2. Click  **User** and select the individual user.


3. Select the **Voice Recording** tab.

Recording Outbound	None	
Recording Inbound	None	
Record Time Profile	<None>	
Recording (Auto)	Mailbox	402 Extn402
Auto Record Calls	External	
Recording (Manual)	Mailbox	402 Extn402

4. Use **Recording (Manual)** to specify the destination for the recordings. By default, this is a user's own mailbox.

- **Mailbox**  
This is the default option. When selected, you can use the adjacent drop down list to select the destination user or hunt group mailbox. These files are typically 1MB per minute.
- **Voice Recording Library**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.711 format file that Contact Recorder for IP Office converts to G.729A format after the file transfer. These files are typically 60KB per minute.
- **Voice Recording Library Authenticated**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.726 format file that contains file authentication information. Any subsequent editing of the file invalidates that information. Contact Recorder for IP Office does not convert the file to G.729A format after the file transfer. These files are typically 120KB per minute.

5. Click **OK**.

6. Click  to merge the configuration change back to the IP Office.

## 3.4.2 Triggering Manual Call Recording






There are several ways to start manually recording a telephone call.

- [Using one-X Portal for IP Office](#) <sup>[37]</sup>
- [Using IP Office SoftConsole](#) <sup>[37]</sup>
- [Using a Programmable Button](#) <sup>[38]</sup>
- [Using a Short Code](#) <sup>[38]</sup>

### 3.4.2.1 Using one-X Portal for IP Office


A user can use one-X Portal for IP Office to stop and start manual call recording.

#### To start call recording using one-X Portal for IP Office:

1. Using the  **Calls** gadget on the **Main** tab, select the call tab for the connected call. It will be the tab with two connected handsets  icon on the right.
2. To start recording the call, click on the  record button on the right. If the button displays as an  icon then recording is not available for some reason.
3. Once recording has started, the button changes to an  icon. Click on this to end recording. Call recording also automatically stops if you park, transfer or turn the call in to a conference. If you hold the call, call recording is paused while the call is on hold.

### 3.4.2.2 Using IP Office SoftConsole

The SoftConsole operator can manually record all or part of a current telephone call.




- Press the  button on the toolbar. The button acts as a toggle. Press the button again to stop recording.
- Select **Actions** > **Record Call**. This action toggles and so also stops recording.
- Press **F5** to start recording. Press **F5** again to stop the recording.

---

### 3.4.2.3 Using a Programmable Button

You can program the call record function against a DSS key.

#### To set a DSS key for manual recording:

1. Start IP Office Manager and load the configuration from the primary server.
2. In the Navigation pane, click  **User** and select the individual user.
3. Select the **Button Programming** tab.
4. Select the required DSS key and click **Edit**.
5. Click  to browse for the **Action**. The Button Programming window opens.
6. Select **Advanced | Call | Call Record**. Click **OK**.
7. In the **Action Data** field, enter the description to appear on the telephone display.
8. Click **OK**.
9. Click  to save the configuration file.

### 3.4.2.4 Using a Short Code

The short code feature **Call Record** triggers manual call recording. The example short code (\*95) can be set up as a user or system short code.

Field	Contains...
Code	*95
Feature	Call Record
Telephone Number	[Leave blank]
Line Group Id	0

#### To use the short code

1. During a call, put the caller on hold.
2. Dial the short code. The held call is automatically reconnected and recording begins.

## 3.5 Configuring Automatic Call Recording

You can configure the IP Office system to automatically record calls based on the user, hunt group, incoming call route or account code.

Trigger	Incoming	Outgoing	Duration
<b>Incoming Call Route</b>	Yes	-	For the call duration or up to 1 hour.
<b>Hunt Group</b>	Yes	-	Until ended or until transferred to a user outside the hunt group or its overflow group.
<b>User</b>	Yes	Yes	Until the user ends or transfers call.
<b>Account Code</b>	-	Yes	Until the user ends or transfers calls.

- Individual calls may match several recording criteria. In that case:
  - If the destinations for the recordings are different, separate recordings occur with the durations as indicated above.
  - If the destinations for the recordings are the same, the system makes a single recording using either the incoming call route, hunt group or user duration in that order of priority.
- Multiple recordings of the same call use multiple voicemail channels.
- Time profiles can control when automatic call recording is used.
- For inbound calls, recording will not take place if the call goes to normal voicemail to leave a mailbox message.
- If set to mandatory call recording, busy tone is returned to the caller when no voicemail ports are available to do the recording.
- Where calls have been answered using a Line appearance button, the call recording uses the voicemail setting of the original call route destination.


### To configure automatic call recording:

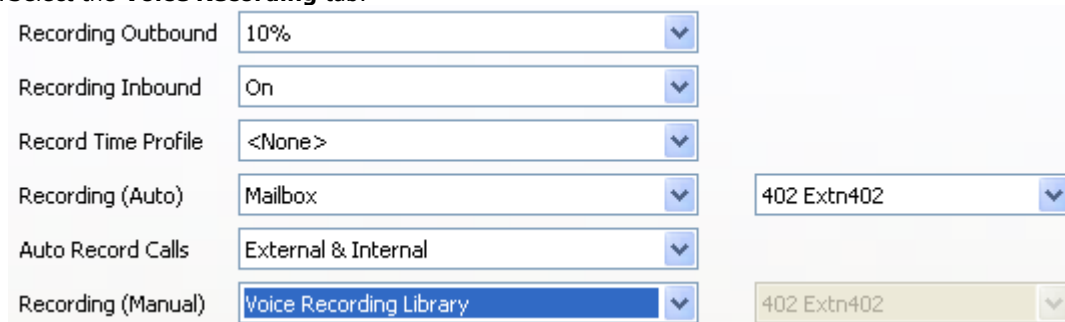
- [To configure automatic user recording](#) <sup>40</sup>
- [To configure automatic hunt group recording](#) <sup>41</sup>
- [To configure incoming call route recording](#) <sup>42</sup>
- [To configure account code recording](#) <sup>43</sup>

### 3.5.1 User Automatic Recording


You can automatically record calls to and from a user. You can select just external calls or all calls.

#### To set automatic call recording for a user:

1. Start IP Office Manager and load the configuration from the primary server.
2. In the navigation pane, click  **User**. Select the required user.
3. Select the **Voice Recording** tab.



Recording Outbound	10%	
Recording Inbound	On	
Record Time Profile	<None>	
Recording (Auto)	Mailbox	402 Extn402
Auto Record Calls	External & Internal	
Recording (Manual)	Voice Recording Library	402 Extn402

4. From the **Record Inbound** and **Record Outbound** drop-down lists, select the recording frequency.
  - **None:** Do not record.
  - **On:** Record all calls if possible.
  - **Mandatory:** Record all calls. If recording is not possible, return busy tone to the caller.
  - **xx%:** Record calls at intervals matching the set percentage. For example, for every other call select **50%**.
  - For inbound calls, recording will not take place if the call also goes to normal voicemail.
5. Use **Record Time Profile** to select a time profile that specifies when automatic call recording is active. If not set, recording is active at all times.
6. Use **Auto Record Calls** to select whether **External** or **External & Internal** calls are included.
7. Use **Recording (Auto)** to specify the destination for the recordings. By default, this is a user's own mailbox.
  - **Mailbox**  
This is the default option. When selected, you can use the adjacent drop down list to select the destination user or hunt group mailbox. These files are typically 1MB per minute.
  - **Voice Recording Library**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.711 format file that Contact Recorder for IP Office converts to G.729A format after the file transfer. These files are typically 60KB per minute.
  - **Voice Recording Library Authenticated**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.726 format file that contains file authentication information. Any subsequent editing of the file invalidates that information. Contact Recorder for IP Office does not convert the file to G.729A format after the file transfer. These files are typically 120KB per minute.
8. Click **OK**.
9. Click  to send the configuration back to the IP Office.




## 3.5.2 Hunt Group Automatic Recording

You can automatically record calls answered by any member of a hunt group. You can select just external calls or all calls.

### To set automatic call recording for a hunt group:

1. Start IP Office Manager and load the configuration from the primary server.

2. In the Navigation pane, click  **Hunt Group**.

3. Select the required hunt group.

4. Select the **Voice Recording** tab.

Record Inbound	<input type="text" value="On"/>
Record Time Profile	<input type="text" value="&lt;None&gt;"/>
Recording (Auto)	<input type="text" value="Mailbox"/> <input type="text"/>
Auto Record Calls	<input type="text" value="External"/>

5. Use **Record Time Profile** to select a time profile that specifies when automatic call recording is active. If not set, recording is active at all times.

6. Use **Auto Record Calls** to select whether **External** or **External & Internal** calls are included.


7. From the **Record Inbound** drop-down list, select the recording frequency.

- **None:** Do not record.
- **On:** Record all calls if possible.
- **Mandatory:** Record all calls. If recording is not possible, return busy tone to the caller.
- **xx%:** Record calls at intervals matching the set percentage. For example, for every other call select **50%**.
- For inbound calls, recording will not take place if the call also goes to normal voicemail.

8. Use **Recording (Auto)** to specify the destination for the recordings.

- **Mailbox**  
This is the default option. When selected, you can use the adjacent drop down list to select the destination user or hunt group mailbox. These files are typically 1MB per minute.
- **Voice Recording Library**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.711 format file that Contact Recorder for IP Office converts to G.729A format after the file transfer. These files are typically 60KB per minute.
- **Voice Recording Library Authenticated**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.726 format file that contains file authentication information. Any subsequent editing of the file invalidates that information. Contact Recorder for IP Office does not convert the file to G.729A format after the file transfer. These files are typically 120KB per minute.

9. Click **OK**.

10. Click  to send the configuration back to the IP Office.

### 3.5.3 Incoming Call Route Automatic Recording

You can automatically record incoming external calls routed by a particular incoming call route. Note, in a Server Edition network, by default every system in the network shares the same incoming call routes.

#### To set automatic call recording for an incoming call route:

1. Start IP Office Manager and load the configuration from the primary server.

2. In the Navigation pane, click  **Incoming Call Route**.

3. Select the required incoming call route.

4. Select the **Voice Recording** tab.



5. From the **Record Inbound** drop-down list, select the recording frequency.

- **None:** Do not record.
- **On:** Record all calls if possible.
- **Mandatory:** Record all calls. If recording is not possible, return busy tone to the caller.
- **xx%:** Record calls at intervals matching the set percentage. For example, for every other call select **50%**.
- For inbound calls, recording will not take place if the call also goes to normal voicemail.

6. Use **Record Time Profile** to select a time profile that specifies when automatic call recording is active. If not set, recording is active at all times.

7. Specify the destination for the recordings or select the option to place the recordings in the voice recording library.

- **Mailbox**  
This is the default option. When selected, you can use the adjacent drop down list to select the destination user or hunt group mailbox. These files are typically 1MB per minute.
- **Voice Recording Library**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.711 format file that Contact Recorder for IP Office converts to G.729A format after the file transfer. These files are typically 60KB per minute.
- **Voice Recording Library Authenticated**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.726 format file that contains file authentication information. Any subsequent editing of the file invalidates that information. Contact Recorder for IP Office does not convert the file to G.729A format after the file transfer. These files are typically 120KB per minute.


8. Click **OK**.

9. Click  to send the configuration back to the IP Office.


### 3.5.4 Account Code Automatic Call Recording

You can automatically record outgoing external calls that use a particular account code. Note, in a Server Edition network, by default every system in the network shares the same account codes.

#### To set automatic call recording for an outgoing account call:

1. Start IP Office Manager and load the configuration from the primary server.
2. In the Navigation pane, click  **Account Code**.
3. Select the required account code.
4. Select the **Voice Recording** tab.

Record Outbound	On	
Record Time Profile		
Recording (Auto)	Mailbox	<None>

5. From the **Record Outbound** drop-down list, select the recording frequency.
  - **None:** Do not record.
  - **On:** Record all calls if possible.
  - **Mandatory:** Record all calls. If recording is not possible, return busy tone to the caller.
  - **xx%:** Record calls at intervals matching the set percentage. For example, for every other call select **50%**.
  - For inbound calls, recording will not take place if the call also goes to normal voicemail.
6. Select the **Recording Time Profile** to select a time profile that specifies when automatic call recording is active. If not set, recording applies at all times.
7. Use the **Recording (Auto)** option to select the destination for the recording.
  - **Mailbox**  
This is the default option. When selected, you can use the adjacent drop down list to select the destination user or hunt group mailbox. These files are typically 1MB per minute.
  - **Voice Recording Library**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.711 format file that Contact Recorder for IP Office converts to G.729A format after the file transfer. These files are typically 60KB per minute.
  - **Voice Recording Library Authenticated**  
Use this option to have the recordings transferred to the Contact Recorder for IP Office application after recording. This option produces a G.726 format file that contains file authentication information. Any subsequent editing of the file invalidates that information. Contact Recorder for IP Office does not convert the file to G.729A format after the file transfer. These files are typically 120KB per minute.
8. Click **OK**.
9. Click  to send the configuration back to the IP Office.

---

## 3.6 Pausing Recording

Sometimes it is a requirement to pause call recording. For example, when recording calls where the user asks the caller to reveal sensitive information such as a credit card number.

To do this, you can assign a pause recording button to a user's phone. The user can use the button with manually and automatically recorded calls.




The button status indicates when call recording is paused. Pressing the button again restarts call recording. The system can also automatically restart recording after a set delay.

If the voicemail system provides an [advice of call recording warning](#)<sup>34</sup>, pausing recording triggers a "Recording paused" prompt and a repeat of the advice of call recording warning when recording resumes.

### 3.6.1 Configuring a Pause Recording Button

To pause recording, you need to configure a pause recording button for the user.


#### To configure a pause recording button:

1. Start IP Office Manager and load the configuration from the primary server.
2. In the Navigation pane, click  **User** and select the individual user.
3. Select the **Button Programming** tab.
4. Select the required DSS key and click **Edit**.
5. Click  browse for the **Action**. The Button Programming window opens.
6. Select **Advanced | Call | Pause Recording**. Click **OK**.
7. In the **Action Data** field, enter the description to appear on the telephone display.
8. Click **OK**.
9. Click  to save the configuration file.


### 3.6.2 Setting the Auto Restart Delay

By default, the system automatically restarts a paused recording after 15 seconds.

#### To set the auto restart delay for paused recording:

1. Start IP Office Manager and load the configuration from the primary server.
2. In the Navigation pane, click  **System**.
3. Click the **Voicemail** tab.
4. Set **Auto Restart Paused Recording** to the required time in seconds or never.
5. Save the configuration back to the IP Office system.

## 3.7 Customisable Callflow Options

In customized voicemail callflows, the voicemail server uses a  **Leave Mail** action to record a message. The action's settings include the option to have the resulting message sent to Contact Recorder for IP Office.

# Chapter 4.

## Additional Processes

---

## 4. Additional Processes

### 4.1 Enabling DVD Archiving

When recording storage space is limited, the Contact Recorder for IP Office automatically deletes recordings on a first in first out (FIFO) basis. To avoid this and to conserve space on the server, Contact Recorder for IP Office can archive older recordings to a DVD+RW disc (single layer), to a Blue Ray -R disc (single layer) or to network attached storage.

This section covers using the application server's own DVD drive as the archive destination. For other options, refer to the [Administering Contact Recorder for IP Office manual](#)<sup>[12]</sup>.

#### Process Summary

1. [Identifying the drive path and udi](#)<sup>[46]</sup>
2. [Disabling the media detection service](#)<sup>[47]</sup>
3. [Entering the drive in Contact Recorder for IP Office](#)<sup>[48]</sup>

#### 4.1.1 Identifying the Drive Path and UDI

The file path for DVD drives, for example `/dev/sr0`, can vary between servers. The process below determines the drive path and **udi** for the drive.

##### To identify the DVD drive name:

1. At the physical server, start its desktop:
  - a. Enter the command **startx**.
  - b. From the list of users for logging in click **Other...**
  - c. Enter **root** as the **Username**.
  - d. Enter the root user's password.
  - e. If a warning appears about logging in as the root super user, click **Close**.
2. We need to obtain a list of all the drives mounted on the server:
  - a. Click Applications and select System Tools | Terminal. This starts a command line window.
  - b. In the terminal window, enter **lshal -l > hal.txt**. This outputs the details of all the mounted drives to a text file.
3. We can now identify the details of the DVD drive:
  - a. Double click on root's home to open the folder for root's files.
  - b. Locate the file **hal.txt** and double-click on it. The file opens in the gedit file editor.
  - c. Use the find function to search for **cdrom**. If this fails, try searching for **cdrom1** or **dvd**.
  - d. The file consists of section of data, each starting with **udi =**. Locate the first such section containing your search string and containing a line similar to **block.device = '/dev/sr0' (string)**.
4. We can test whether the value shown for block.device is the path for the DVD drive.
  - a. In the terminal window, enter the path as part of an eject command. For our example, enter **eject /dev/sr0**. The drive tray should open.
  - b. Enter **eject -t /dev/sr0** to close the drive tray.
5. If necessary, continue searching the **hal.txt** file for the correct path for the drive.
6. Once you have identified the drive, note the udi value shown above block.device. This will be something like **/org/freedesktop/Hal/devices/storage\_model\_DVD\_RW\_DW\_Q30A**. For example, **udi = '/org/freedesktop/Hal/devices/storage\_model\_DVD\_RW\_DW\_Q30A'**.
7. This value is needed in the following process, highlight the value (the part between the ' ' marks) and select **Edit | Copy**.
8. Having identified the drive path and obtained the drive's **udi**, see [Disabling the Media Detection Service](#)<sup>[47]</sup>.

## 4.1.2 Disabling the Media Detection Service

The HAL media detection service interferes with Contact Recorder for IP Office.


### To disable a drive from the media detection service:

1. Use the process in [Identifying the Drive Path](#) to also identify the drive's **uid**.
2. In the terminal window, check the current value of the drive's **media\_check\_enabled** flag.
  - a. Enter **hal-get-property --udi <udi> --key storage.media\_check\_enabled**, replacing **<udi>** with the drive's udi value.
  - b. For example, **hal-get-property --udi /org/freedesktop/Hal/devices/storage\_model\_DVD\_RW\_DW\_Q30A --key storage.media\_check\_enabled**.
  - c. The response will be either **true** or **false**. If **false**, then media detection for the drive is already disabled.
3. If **true**, the media detection service needs to be disabled:
  - a. Enter **hal-set-property --udi <udi> --key storage.media\_check\_enabled --bool false**, replacing **<udi>** with the drive's udi value.
  - b. For example, **hal-set-property --udi /org/freedesktop/Hal/devices/storage\_model\_DVD\_RW\_DW\_Q30A --key storage.media\_check\_enabled --bool false**.
4. Repeat step 2 to check that the response is now **false**.
5. You must configure the server to repeat the command used in step 3 when rebooted. You can do this by adding the command to the file `/etc/rc.local`.
  - a. Select the whole **hal-set-property...** line in the terminal window and select **Edit | Copy**.
  - b. Double-click on **Computer**, then **Filesystem** and then **etc**.
  - c. Locate the file `rc.local`. Right-click on the file and select **Open with gedit**.
  - d. Add a new line at the end of the file and select **Edit | Paste** to paste in the **hal-set-property** command used in step 3.
  - e. Click **Save** and close the editor.

### 4.1.3 Entering the Drive in Contact Recorder for IP Office

Having [identified a drive's path](#)<sup>[46]</sup> and [disabled media detection](#)<sup>[47]</sup> on that drive, you can add the drive path to Contact Recorder for IP Office.

#### To enable archiving to the DVD:

1. Login to Contact Recorder for IP Office as an administrator.
2. Select  **Operations**.
3. Click **Add DVD drive**.

Drive path(s)	<input type="text"/>
To use multiple drives/paths in series, enter their names separated by semicolons.	
Comment (optional)	<input type="text"/>
<input type="button" value="Advanced"/>	<input type="button" value="Close Window"/> <input type="button" value="Enter and Close"/>

- **Drive path(s)**  
Enter the path for the server's DVD drive. For example `/dev/sr0`.

4. Click **Enter and Close**.




---

## 4.2 Disabling HTTP Access

You can disable HTTP access to Contact Recorder for IP Office.

### To disable HTTP access:

1. Login to Contact Recorder for IP Office as an administrator.
2. Select  **System**.
3. Click the **Edit link for Allow unencrypted (http) access?** and deselect the option.
4. Click **Enter**.



# Chapter 5.

# License

---

## 5. License

© 2003 – 2013 Verint Systems Inc. All Rights Reserved. THIS AVAYA PRODUCT ('Product') CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION OF VERINT SYSTEMS INC. OR ITS SUBSIDIARIES. USE OF THE PRODUCT INDICATES THE END USER'S ACCEPTANCE OF THE TERMS SET FORTH HEREIN AND THE GENERAL LICENSE TERMS AVAILABLE ON THE AVAYA WEBSITE AT <http://support.avaya.com/LicenseInfo/>, including the following AVAYA GLOBAL SOFTWARE LICENSE TERMS (or "Software License Terms"):

### AVAYA GLOBAL SOFTWARE LICENSE TERMS

#### REVISED: AUGUST 2013

THIS END USER LICENSE AGREEMENT ("SOFTWARE LICENSE TERMS") GOVERNS THE USE OF AVAYA'S PROPRIETARY SOFTWARE AND THIRD-PARTY PROPRIETARY SOFTWARE. READ THESE SOFTWARE LICENSE TERMS CAREFULLY, IN THEIR ENTIRETY, BEFORE INSTALLING, DOWNLOADING OR USING THE AVAYA SOFTWARE (AS DEFINED IN SECTION A BELOW). BY INSTALLING, DOWNLOADING OR USING THE AVAYA SOFTWARE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE DOING SO (HEREINAFTER REFERRED TO INTERCHANGEABLY AS "YOU" AND "END USER"), AGREE TO THESE SOFTWARE LICENSE TERMS AND CONDITIONS AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. OR THE APPLICABLE AVAYA AFFILIATE ("AVAYA"). IF YOU ARE ACCEPTING THESE SOFTWARE LICENSE TERMS ON BEHALF OF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT THAT YOU HAVE THE AUTHORITY TO BIND SUCH ENTITY TO THESE SOFTWARE LICENSE TERMS. IF YOU DO NOT HAVE SUCH AUTHORITY OR DO NOT WISH TO BE BOUND BY THESE SOFTWARE LICENSE TERMS, YOU MUST RETURN OR DELETE THE SOFTWARE WITHIN TEN (10) DAYS OF DELIVERY FOR A REFUND OF THE FEE, IF ANY, YOU PAID FOR THE LICENSE OR IF SOFTWARE IS ACCESSED ELECTRONICALLY, SELECT THE "DECLINE" BUTTON AT THE END OF THESE SOFTWARE LICENSE TERMS.

**A. Scope.** These Software License Terms are applicable to anyone who installs, downloads, and/or uses Avaya Software and/or Documentation, obtained from Avaya or an Avaya reseller, distributor, direct partner, system integrator, or other partner authorized to provide Avaya Software to End Users in the applicable territory ("Avaya Channel Partner"). You are not authorized to use the Software if the Software was obtained from anyone other than Avaya or an Avaya Channel Partner.

These Software License Terms govern your use of the Software and/ or Documentation except to the extent 1) you have a separate signed agreement with Avaya governing your use of the Software, 2) the Software is accompanied by a Shrinkwrap License, or 3) the Software is governed by Third Party Terms. If you have a separate signed purchase agreement with Avaya governing your use of the Software, such agreement shall take precedence over these Software License Terms to the extent of any conflict. With respect to third party elements subject to a Shrinkwrap License or other Third Party Terms, the Shrinkwrap License or other Third Party Terms shall take precedence over any signed purchase Agreement with Avaya and these Software License Terms to the extent of any conflict.

"Software" means computer programs in object code, provided by Avaya or an Avaya Channel Partner, whether as stand-alone products or pre-installed on hardware products, and any upgrades, updates, bug fixes, or modified versions thereto. "Documentation" means information published by Avaya in varying mediums which may include product information, operating instructions and performance specifications that Avaya generally makes available to users of its products. Documentation does not include marketing materials.

**B. License Grant.** Avaya grants you a personal, non-sublicensable, non-exclusive, non-transferable license to use Software and associated Documentation obtained from Avaya or an Avaya Channel Partner and for which applicable fees have been paid for your internal business purposes at the indicated capacity and features and within the scope of the applicable license types described below and at locations where the Software is initially installed. Documentation shall be used only in support of the authorized use of the associated Software. Software installed on mobile-devices and clients, such as a laptop or mobile phone, may be used outside of the country where the software was originally installed, provided that such use is on a temporary basis only.

- i. Right to Move License Entitlements. Notwithstanding the foregoing limitation permitting use of the Software only at the location where it is initially installed, you may move right to use license entitlements (RTU's) for certain specified types of Software from one location to another in accordance with Avaya's then-current software license move policy for that Software ("License Portability Policy"), which is available upon request, subject to the following conditions:
  - a. You shall provide written notice within ten (10) days to Avaya of any RTU moves including but not limited to, the number and type of licenses moved, the location of the original Server and the location of the new Server, the date of such RTU moves and any other information that Avaya may reasonably request;
  - b. You may only move RTU's to and from Designated Processors or Servers supporting the same Software application;
  - c. You must reduce the quantity of the licenses on the original Server by the number of RTU's being moved to the new Server.
  - d. You acknowledge that (1) you may be charged additional fees when moving RTU's as per Avaya's then-current License Portability Policy, (2) maintenance services do not cover system errors caused by moves not performed by Avaya, (3) you are responsible for any programming, administration, design assurance, translation or other activity to make sure the Software will scale and perform as specified as a result of any license moves, and if any such transfer results in a requirement for Avaya system engineering or requires the use of on-site Avaya personnel, you will be charged the Time & Materials fees for such activity;
  - e. If your maintenance coverage differs on licenses on the same product instance at the location of the new Server, service updates, recasts and/or fees may apply and any fee adjustments for differences in coverage will only be made on a going forward basis as of the date Avaya receives notice of the RTU move; and

- f. You may move RTU's from one Affiliate to another Affiliate provided that you comply with all of the conditions of this section, including, without limitation, providing the name and address of the new Affiliate in your written notice under subpart (a) above, and provided such new Affiliate agrees to be bound by these Software License Terms. "Affiliate" means any entity that is directly or indirectly controlling, controlled by, or under common control with Avaya Inc. or End User. For purposes of this definition, "control" means the power to direct the management and policies of such party, directly or indirectly, whether through ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.
- ii. Non-Production License Grant. With respect to Software distributed by Avaya to you for non-production purposes, the scope of the license granted herein shall be to use the Software in a non-production environment solely for testing or other non-commercial purposes on a single computer ("Non-Production License").

**C. All Rights Reserved.** Avaya retains title to and ownership of the Software, Documentation, and any modifications or copies thereof. Except for the limited license rights expressly granted in these Software License Terms, Avaya reserves all rights, including without limitation copyright, patent, trade secret, and all other intellectual property rights, in and to the Software and Documentation and any modifications or copies thereof. The Software contains trade secrets of Avaya, its suppliers, or licensors, including but not limited to the specific design, structure and logic of individual Software programs, their interactions with other portions of the Software, both internal and external, and the programming techniques employed.

**D. General License Restrictions.** To the extent permissible under applicable law, you agree not to: (i) decompile, disassemble, reverse engineer, reverse translate or in any other manner decode the Software; (ii) alter, modify or create any derivative works or enhancements, adaptations, or translations of the Software or Documentation; (iii) sell, sublicense, lease, rent, loan, assign, convey or otherwise transfer the Software or Documentation except as expressly authorized by Avaya in writing, and any attempt to do so is void; (iv) distribute, disclose or allow use of the Software or Documentation, in any format, through any timesharing service, service bureau, network or by any other similar means except as expressly authorized by Avaya in writing; (v) allow any service provider or other third party, with the exception of Avaya's authorized maintenance providers who are acting solely on behalf of and for the benefit of End User, to use or execute any software commands that facilitate the maintenance or repair of any product; (vi) gain access to or the use of any Software or part thereof without authorization from Avaya; (vii) enable or activate, or cause, permit or allow others to enable or activate any logins reserved for use by Avaya or Avaya's authorized maintenance providers; (viii) publish the results of any tests run on the Software; (ix) disclose, provide, or otherwise make available to any third party any trade secrets contained in the Software or Documentation; or (x) permit or encourage any third party to do any of the foregoing.

End User agrees not to allow anyone other than its authorized employees, agents or representatives who have a need to use the Software or Documentation to have access to the Software or Documentation. End User agrees to inform any third party to whom you give access to the Software or Documentation of these Software License Terms and shall obligate such third party to comply with such terms and provisions. End User shall be responsible for any third party's failure to comply with these Software License Terms and shall indemnify Avaya for any damages, loss, expenses or costs, including attorneys' fees and costs of suit, incurred by Avaya as a result of non-compliance with this section.

If the Software is rightfully located in a member state of the European Union and End User needs information about the Software in order to achieve interoperability of an independently created software program with the Software, End User will first request such information from Avaya. Avaya may charge End User a reasonable fee for the provision of such information. End User shall maintain such information in strict confidence using no less than the same care it uses to protect its own confidential information and shall use such information only in accordance with the terms and conditions under which Avaya provides such information. To the extent that the End User is expressly permitted by applicable mandatory law to undertake any activities related to achieving interoperability of an independently created software program with the Software, End User will not exercise those rights until End User has given Avaya twenty (20) days written notice of its intent to exercise any such rights.

**E. Proprietary Rights Notices.** End User shall affix to each copy of the Software made by End User, in the same form and location, a reproduction of the copyright notices, trademarks, and all other proprietary legends and/or logos of Avaya and/or Avaya's suppliers appearing on the original copy of the Software delivered to End User, and shall retain the same without alteration on all original copies.

**F. Backup Copies.** End User may create a reasonable number of archival and backup copies of the Software and the Documentation.

**G. Upgrades.** End User's right to use any upgrades to the Software shall be conditioned upon End User having a valid license to use the original Software and paying the applicable license fee to Avaya or an Avaya Channel Partner for such upgrade.

**H. Warranty.** Avaya's Global Product Warranty Policy for End Users, which details a limited warranty for Software and Software media and the applicable procedures, exclusions, and disclaimers, is available through the following website: <http://support.avaya.com>. Please note that if you are acquiring the Software from an Avaya Channel Partner outside the United States of America or Canada, the warranty is provided to you by said Avaya Channel Partner and not by Avaya.

**I. Compliance.** Avaya and the Avaya Channel Partner who provided the Software have the right to inspect or audit by remote polling or other reasonable means, and to inspect End User's books, records, and accounts during normal business hours and with reasonable notice, to determine End User's compliance with these Software License Terms, including but not limited to usage levels. In the event such inspection or audit uncovers non-compliance with these Software License Terms, then without prejudice to Avaya's termination rights hereunder, End User shall promptly pay Avaya any applicable license fees. End User agrees to keep a current record of the location of the Software.

---

**J. Termination of License; Effect of Termination/ Expiration.** If you breach these Software License Terms and if within ten (10) business days of your receipt of a reasonably detailed written request to cure, you have not cured all breaches of license limitations or restrictions, Avaya may, with immediate effect, terminate the licenses granted in these Software License Terms without prejudice to any available rights and remedies Avaya may have at law or in equity. Upon termination or expiration of the license for any reason, you must immediately permanently destroy all copies of the Software and any related materials in your possession or control and, upon Avaya's request, certify such destruction in writing. The provisions concerning confidentiality, the protection of trade secrets and proprietary rights, indemnity, license restrictions, export control, and all limitations of liability and disclaimers and restrictions of warranty (as well as any other terms which, by their nature, are intended to survive termination) will survive any termination or expiration of the Software License Terms.

**K. License Types.** Avaya grants you a license within the scope of the license types described below, with the exception of Heritage Nortel Software, for which the scope of the license is detailed in Section L below, and with the exception of the Software identified in Table 1 below, for which the license is detailed in Section M below. Where the order documentation does not expressly identify a license type, the applicable license will be a Designated System License. The applicable number of licenses and units of capacity for which the license is granted will be one (1), unless a different number of licenses or units of capacity is specified in the documentation or other materials available to you. "Designated Processor" means a single stand-alone computing device. "Server" means a Designated Processor that hosts a software application to be accessed by multiple users.

**Designated System(s) License (DS).** End User may install and use each copy of the Software only on a number of Designated Processors up to the number indicated in the order. Avaya may require the Designated Processor(s) to be identified in the order by type, serial number, feature key, location or other specific designation, or to be provided by End User to Avaya through electronic means established by Avaya specifically for this purpose.

**Concurrent User License (CU).** End User may install and use the Software on multiple Designated Processors or one or more Servers, so long as only the licensed number of Units are accessing and using the Software at any given time. A "Unit" means the unit on which Avaya, at its sole discretion, bases the pricing of its licenses and can be, without limitation, an agent, port or user, an e-mail or voice mail account in the name of a person or corporate function (e.g., webmaster or helpdesk), or a directory entry in the administrative database utilized by the Software that permits one user to interface with the Software. Units may be linked to a specific, identified Server.

**Database License (DL).** End User may install and use each copy of the Software on one Server or on multiple Servers provided that each of the Servers on which the Software is installed communicates with no more than a single instance of the same database.

**CPU License (CP).** End User may install and use each copy of the Software on a number of Servers up to the number indicated in the order provided that the performance capacity of the Server(s) does not exceed the performance capacity specified for the Software. End User may not re-install or operate the Software on Server(s) with a larger performance capacity without Avaya's prior consent and payment of an upgrade fee.

**Named User License (NU).** You may: (i) install and use the Software on a single Designated Processor or Server per authorized Named User (defined below); or (ii) install and use the Software on a Server so long as only authorized Named Users access and use the Software. "Named User," means a user or device that has been expressly authorized by Avaya to access and use the Software. At Avaya's sole discretion, a "Named User" may be, without limitation, designated by name, corporate function (e.g., webmaster or helpdesk), an e-mail or voice mail account in the name of a person or corporate function, or a directory entry in the administrative database utilized by the Software that permits one user to interface with the Software.

**Shrinkwrap License (SR).** You may install and use the Software in accordance with the terms and conditions of the applicable license agreements, such as "shrinkwrap" or "clickthrough" license accompanying or applicable to the Software ("Shrinkwrap License").

**L. Heritage Nortel Software.** "Heritage Nortel Software" means the software that was acquired by Avaya as part of its purchase of the Nortel Enterprise Solutions Business in December 2009. The Heritage Nortel Software currently available for license from Avaya is the software contained within the list of Heritage Nortel Products located at <http://support.avaya.com/licenseinfo> under the link "Heritage Nortel Products." For Heritage Nortel Software, Avaya grants Customer a license to use Heritage Nortel Software provided hereunder solely to the extent of the authorized activation or authorized usage level, solely for the purpose specified in the Documentation, and solely as embedded in, for execution on, or (in the event the applicable Documentation permits installation on non-Avaya equipment) for communication with Avaya equipment. Charges for Heritage Nortel Software may be based on extent of activation or use authorized as specified in an order or invoice.

**M. Table Software.** For the Software identified in Table 1 below, Avaya grants End User a license within the scope of the license types described in this Section as identified in Table 1. The applicable number of licenses and units of capacity for which the license is granted will be one (1), unless a different number of licenses or units of capacity is specified in the Documentation or other materials available to End User. Where the order documentation does not expressly identify a license type, the applicable license will be a SR-Seat. Notwithstanding anything to the contrary, Avaya grants you a license to one or more of the following license types:

Table 1 License Type(s):

"SR-Channel" means a Shrinkwrap license to use a physical connection between or logical address associated with a recording device and an audio source.

"SR-Enterprise" means a Shrinkwrap license to use, without limitation on the number of copies or users applicable to that End User, that Software within that End User's technical environment in conjunction with other Software licensed.

"SR-Seat" means a Shrinkwrap license to use the number of uniquely identified work-stations (i) on which the Software is licensed to be installed, (ii) from or to which the Software will send or receive data, or (iii) about which the Software generates data. Any one or more of the foregoing, in the aggregate, applicable to a work-station shall qualify that work-station as a licensed Seat. Seat licenses are not concurrent, except that licenses relating to a work-station may be transferred to another work-station so long as such transfer is on a permanent basis.

"SR-Server" means a Shrinkwrap license to install the Software on a single central computer server.

"SR-Site" means a Shrinkwrap license to use the Software at a physical End User location, without limitation on the number of copies or users applicable to that physical End User location.

**N. Third Party Components.** Certain software programs or portions thereof included in the Software may contain software (including open source software) distributed under third party agreements ("Third Party Components"), which may contain terms that expand or limit rights to use certain portions of the Software ("Third Party Terms"). Information regarding distributed Linux OS source code (for those product that have distributed Linux OS source code) and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply is available in the Documentation or on Avaya's website at: <http://support.avaya.com/Copyright>.

**O. Limitation of Liability.** EXCEPT FOR PERSONAL INJURY CLAIMS OR WILLFUL MISCONDUCT AND TO THE EXTENT PERMITTED UNDER APPLICABLE LAW, NEITHER AVAYA, ITS SUPPLIERS, NOR ANY OF THEIR DIRECTORS, OFFICERS, EMPLOYEES, OR AGENTS SHALL BE LIABLE FOR (i) ANY INCIDENTAL, SPECIAL, PUNITIVE, EXEMPLARY, STATUTORY, INDIRECT OR CONSEQUENTIAL DAMAGES, (ii) ANY LOSS OF PROFITS, REVENUE, OR DATA, TOLL FRAUD, OR COST OF COVER OR (iii) ANY DIRECT DAMAGES ARISING UNDER THESE SOFTWARE LICENSE TERMS IN EXCESS OF THE FEES PAID FOR THE SOFTWARE GIVING RISE TO THE CLAIM. REGARDLESS OF WHETHER THEY WERE ADVISED, HAD OTHER REASON TO KNOW, OR IN FACT KNEW OF THE POSSIBILITY THEREOF. THE LIMITATIONS OF LIABILITY IN THIS SECTION WILL APPLY TO ANY DAMAGES, HOWEVER CAUSED, AND ON ANY THEORY OF LIABILITY, WHETHER FOR BREACH OF CONTRACT, TORT (INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE), OR OTHERWISE.

**P. Protection of Software and Documentation.** End User acknowledges that the Software and Documentation are confidential information of Avaya and its suppliers and contain trade secrets of Avaya and its suppliers. End User agrees at all times to protect and preserve in strict confidence the Software and Documentation using no less than the level of care End User uses to protect its own information of a confidential nature and to implement reasonable security measures to protect the trade secrets of Avaya and its suppliers.

**Q. Personal Data.** The download or use of the Software may require the processing of personal data (including, but not limited to contact name, company address, company phone or fax, or company email) pertaining to your company or to your company's personnel. Such data will be used by Avaya for communication, administrative, and operational purposes related to the Software, including but not limited to tracking Software activations, communicating regarding trouble tickets and alarms, and providing Software updates. Personal data required to download or use the Software must be submitted to Avaya. Failing the submission of such data, the download or use of the Software may not be possible. You or your personnel have a right to access and correct erroneous personal data pertaining to you or your personnel and to object for legitimate reasons to the processing and transfer of this data. You can exercise this right by contacting in writing the Data Privacy Officer of the applicable Avaya Affiliate.

**R. High Risk Activities.** The Software is not fault-tolerant and is not designed, manufactured or intended for any use in any environment that requires fail-safe performance in which the failure of the Software could lead to death, personal injury or significant property damage ("High Risk Activities"). Such environments include, among others, control systems in a nuclear, chemical, biological or other hazardous facility, aircraft navigation and communications, air traffic control, and life support systems in a healthcare facility. End User assumes the risks for its use of the Software in any such High Risk Activities.

**S. Export Control.** End User is advised that the Software is of U.S. origin and subject to the U.S. Export Administration Regulations (EAR). The Software also may be subject to applicable local laws and regulations. Diversion contrary to U.S. and/ or applicable local country law and/ or regulation is prohibited. You agree not to directly or indirectly export, re-export, import, download, or transmit the Software to any country, end user or for any use that is contrary to applicable U.S. and/ or local country regulation or statute (including but not limited to those countries embargoed by the U.S. government). You represent that neither the U.S. Bureau of Industry and Security (BIS) nor any other governmental agency has issued sanctions against End User or otherwise suspended, revoked or denied End User's export privileges. You agree not to use or transfer the Software for any use relating to nuclear, chemical or biological weapons, or missile technology, unless authorized by the U.S. and applicable local government by regulation or specific written license. Additionally, you are advised that the Software may contain encryption algorithm or source code that may not be exported to government or military end users without a license issued by the U.S. BIS and any other country's governmental agencies, where applicable.

**T. U.S Government End Users.** The Software is classified as "commercial computer software" and the Documentation is classified as "commercial computer software documentation" or "commercial items," pursuant to 48 CFR FAR 12.212 or DFAR 227.7202, as applicable.

Any use, modification, reproduction, release, performance, display or disclosure of the Software or Documentation by the Government of the United States shall be governed solely by the terms of these Software License Terms and shall be prohibited except to the extent expressly permitted by these Software License Terms, and any use of the Software and/ or Documentation by the Government constitutes agreement to such classifications and to these Software License Terms.

**U. Acknowledgement.** End User acknowledges that certain Software may contain programming that: (i) restricts, limits and/or disables access to certain features, functionality or capacity of such Software subject to the End User making payment for licenses to such features, functionality or capacity; or (ii) periodically deletes or archives data generated by use of the Software and stored on the applicable storage device if not backed up on an alternative storage medium after a certain period of time.

---

**V. Miscellaneous.** These Software License Terms will be governed by New York law, excluding choice of law principles and the United Nations Convention on Contracts for the International Sale of Goods. Any claim, dispute or controversy (collectively a "Claim") arising out of or relating to these Software License Terms, including without limitation the formation, interpretation, breach or termination hereof, or any issue regarding whether a Claim is subject to arbitration hereunder, that cannot be settled by good faith negotiation between the parties within a reasonable period of time, will be conclusively determined by a final and binding arbitration proceeding to take place in New York City, New York. Such proceeding will be conducted in English and administered by JAMS pursuant to the JAMS Comprehensive Arbitration Rules and Procedures then in effect, or in the event one of the parties is located outside of the United States, pursuant to the JAMS International Arbitration Rules then in effect, before a panel of one arbitrator chosen in accordance with such rules. The arbitrator will not award punitive or exemplary damages, and will not have the authority to limit, expand or otherwise modify the Software License Terms. The ruling by the arbitrator may be entered in any court having jurisdiction over the parties or any of their assets. The parties will evenly split the cost of the arbitrator's fees, but each party will bear their own attorneys' fees and other costs associated with the arbitration. The parties agree that this arbitration provision may be enforced by injunction or other equitable order, and no bond or security of any kind will be required with respect to any such injunction or order. In addition and notwithstanding the foregoing, Avaya shall be entitled to take any necessary legal action, including without limitation seeking immediate injunctive relief from a court of competent jurisdiction, in order to protect Avaya's intellectual property and its confidential or proprietary information (including but not limited to trade secrets). If any provision of these Software License Terms is determined to be unenforceable or invalid, these Software License Terms will not be rendered unenforceable or invalid as a whole, and the provision will be changed and interpreted so as to best accomplish the objectives of the original provision within the limits of applicable law. The failure to assert any rights under the Software License Terms, including, but not limited to, the right to terminate in the event of breach or default, will not be deemed to constitute a waiver of the right to enforce each and every provision of the Software License Terms in accordance with their terms. If you move any Software, and as a result of such move, a jurisdiction imposes a duty, tax, levy or fee (including withholding taxes, fees, customs or other duties for the import and export of any such Software), then you are solely liable for, and agree to pay, any such duty, taxes, levy or other fees.

**W. Agreement in English.** The parties confirm that it is their wish that these Software License Terms, as well as all other documents relating hereto, including all notices, have been and shall be drawn up in the English language only. Les parties aux présentes confirment leur volonté que cette convention, de même que tous les documents, y compris tout avis, qui s'y rattachent, soient rédigés en langue anglaise. Las partes ratifican que es su voluntad que este Contrato, así como cualquier otro documento relacionado con el mismo, incluyendo todo tipo de notificaciones, han sido redactados y deberán continuar siendo redactados únicamente en el idioma inglés.

**X. OPEN SOURCE COMPONENTS.** Certain open source applications ("Open Source") may be included with this computer program. For specific ownership information and license rights relating to those open source applications, please see the "Free and Open Source Licensing Information" guide ("Guide") provided with your computer program, or contact your vendor for a copy of that Guide.

A license in each Open Source software application is provided to you in accordance with the specific license terms specified in the Guide. EXCEPT WITH REGARD TO ANY WARRANTIES OR OTHER RIGHTS AND OBLIGATIONS EXPRESSLY PROVIDED DIRECTLY TO YOU FROM AVAYA AND/OR ITS SUPPLIERS, ALL OPEN SOURCE SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OWNERS OF THE OPEN SOURCE SOFTWARE OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THE OPEN SOURCE SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

**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. Suspected security vulnerabilities with Avaya Products should be reported to Avaya by sending mail to: [securityalerts@avaya.com](mailto:securityalerts@avaya.com)

**Trademarks:**

Avaya and the Avaya Logo are trademarks of Avaya Inc. and are registered in the United States and/or other countries. Avaya may also have trademark rights in other terms used herein. References to Avaya include the Nortel Enterprise business, which was acquired as of December 18, 2009. All trademarks identified by ®, TM or SM are registered marks, trademarks, and service marks, respectively, of Avaya Inc. or the property of their respective owners.



**Patents:**

The Verint Systems Inc. products are protected by one or more of the following U.S., European or International Patents: USPN 5,790,798; USPN 6,278,978; USPN 6,370,574; USPN 6,404,857; USPN 6,510,220; USPN 6,724,887; USPN 6,751,297; USPN 6,757,361; USPN 6,782,093; USPN 6,952,732; USPN 6,959,078; USPN 6,959,405; USPN 7,047,296; USPN 7,149,788; USPN 7,155,399; USPN 7,203,285; USPN 7,216,162; USPN 7,219,138; USPN 7,254,546; USPN 7,281,173; USPN 7,284,049; USPN 7,325,190; USPN 7,376,735; USPN 7,424,715; USPN 7,424,718; USPN 7,466,816; USPN 7,478,051; USPN 7,558,322; USPN 7,570,755; USPN 7,574,000; USPN 7,587,041; USPN 7,613,290; USPN 7,633,930; USPN 7,634,422; USPN 7,650,293; USPN 7,660,307; USPN 7,660,406; USPN 7,660,407; USPN 7,672,746; USPN 7,680,264; USPN 7,701,972; USPN 7,734,783; USPN 7,752,043; USPN 7,752,508; USPN 7,769,176; USPN 7,774,854; USPN 7,787,974; USPN 7,788,286; USPN 7,792,278; USPN 7,792,671; USPN 7,801,055; USPN 7,817,795; USPN 7,822,018; USPN 7,826,608; USPN 7,836,171; USPN 7,848,524; USPN 7,853,006; USPN 7,852,994; USPN 7,853,800; USPN 7,853,753; USPN 7,864,946; USPN 7,873,156; USPN 7,881,216; USPN 7,881,471; USPN 7,882,212; USPN 7,882,217; USPN 7,885,813; USPN D606,983; USPN RE40,634; USPN RE41,534; USPN RE41,608; AU 2003214926; CA 2,474,735; CA 2,563,960; CA 2,564,127; CA 2,564,760; CA 2,567,232; CA 2,623,178; CA 2,627,060; CA 2,627,064; CA 2,628,553; EP 1096382; EP 1248449; EP 1284077; DE 1284077; FR 1284077; DE 833489; FR 833489; GB 833,489; GB 2374249; IE 84821; IE 85519; IL 13532400; NZ 534642; ZL 200520118289.3; ZL 200520118288.9; ZL 200520118287.4; and other provisional rights from one or more of the following Published U.S. Patent Applications: US 10/061,491; US 10/467,899; US 10/525,260; US 10/633,357; US 11/166,630; US 11/345,587; US 11/359,195; US 11/359,319; US 11/359,356; US 11/359,357; US 11/359,358; US 11/359,532; US 11/361,208; US 11/388,944; US 11/394,408; US 11/394,410; US 11/394,794; US 11/395,759; US 11/396,062; US 11/428,239; US 11/475,683; US 11/477,124; US 11/478,714; US 11/479,056; US 11/479,267; US 11/479,506; US 11/479,899; US 11/509,549; US 11/509,550; US 11/528,267; US 11/529,132; US 11/529,946; US 11/529,947; US 11/540,107; US 11/540,171; US 11/540,185; US 11/540,281; US 11/540,320; US 11/540,739; US 11/540,785; US 11/540,900; US 11/540,902; US 11/540,904; US 11/541,313; US 11/565,946; US 11/567,808; US 11/567,852; US 11/583,381; US 11/608,340; US 11/608,350; US 11/608,358; US 11/608,438; US 11/608,440; US 11/608,894; US 11/616,490; US 11/621,134; US 11/676,818; US 11/691,530; US 11/692,983; US 11/693,828; US 11/693,899; US 11/693,923; US 11/693,933; US 11/712,933; US 11/723,010; US 11/742,733; US 11/752,458; US 11/771,499; US 11/776,659; US 11/824,980; US 11/831,250; US 11/831,257; US 11/831,260; US 11/831,634; US 11/844,759; US 11/872,575; US 11/924,201; US 11/937,553; US 11/959,650; US 11/968,428; US 12/014,155; US 12/015,375; US 12/015,621; US 12/053,788; US 12/055,102; US 12/057,442; US 12/057,476; US 12/107,976; US 12/118,781; US 12/118,789; US 12/118,792; US 12/164,480; US 12/245,781; US 12/326,205; US 12/351,370; US 12/416,906; US 12/464,694; US 12/466,673; US 12/483,075; US 12/497,793; US 12/497,799; US 12/504,492; US 12/539,640; US 12/608,474; US 12/612,487; US 12/628,089; US 12/630,030; US 12/684,027; US 12/686,213; US 12/708,558; US 12/725,127; US 12/753,137; US 12/762,402; US 12/768,194; US 12/792,796; US 12/840,227; US 12/840,233; US 12/852,144; US 12/879,868; US 12/887,059; US 12/887,089; US 12/888,445; US 12/888,448; US 12/891,620; US 12/915,868; US 12/915,941; US 12/916,006; US 12/940,508; US 12/942,111; US 12/964,891; US 13/005,996; US 13/008,283; US 13/011,870; US 13/011,871; US 13/016,998; and other U.S. and International Patents and Patents Pending.

VERINT, the VERINT logo, ACTIONABLE INTELLIGENCE, POWERING ACTIONABLE INTELLIGENCE, INTELLIGENCE IN ACTION, ACTIONABLE INTELLIGENCE FOR A SMARTER WORKFORCE, VERINT VERIFIED, WITNESS ACTIONABLE SOLUTIONS, STAR-GATE, RELIANT, VANTAGE, X-TRACT, NEXTIVA, EDGEVR, ULTRA, AUDIOLOG, WITNESS, the WITNESS logo, IMPACT 360, the IMPACT 360 logo, IMPROVE EVERYTHING, EQUALITY, CONTACTSTORE, and CLICK2STAFF are trademarks or registered trademarks of Verint Systems Inc. or its subsidiaries. Other trademarks mentioned are the property of their respective owners.

BY CLICKING "ACCEPT" OR "I ACCEPT" OR "AGREE" OR "I AGREE" OR "YES" OR BY USING THE PRODUCT YOU HEREBY ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTOOD THE TERMS AND CONDITIONS OF THIS AGREEMENT AND THAT YOU HEREBY AGREE TO BE BOUND BY ALL OF ITS PROVISIONS. BY CLICKING OR "ACCEPT" OR "I ACCEPT" OR "AGREE" OR "I AGREE" OR "YES" BY USING THE PRODUCT, YOU ALSO CONSENT TO USE ELECTRONIC SIGNATURES AND ACKNOWLEDGE YOUR CLICK OF "ACCEPT" OR "I ACCEPT" OR "AGREE" OR "I AGREE" OR "YES" BUTTON AS ONE.

Table 1

Color Legend			More complete 10.x code list			11.0 code list	
R10.1 Material Code	Short Description (36 Characters)	Verint Lic Type	R10.1 Material Codes	Short Description	Verint Lic Type	R11.0 Material Codes	Short Description
248060	AV WFO R10 ACR IC INTG	Server	248060	AV WFO R10 ACR IC INTG	Server		
248061	AV WFO R10 ACR IC INTG ENTITLE	Server	248061	AV WFO R10 ACR IC INTG ENTL	Server		
248062	AV WFO R10 ACR IC INTG UPG	Server	248062	AV WFO R10 ACR IC INTG UPG	Server		
248063	AV WFO R10 ACR DIALER INTG	Server	248063	AV WFO R10 ACR DIALER INTG	Server	267603	WFO R11 ACR DIALER INTG
248064	AV WFO R10 ACR DIALER INTG ENTITLE	Server	248064	AV WFO R10 ACR DIALER INTG ENTL	Server	267604	WFO R11 ACR DIALER INTG ENTL
248065	AV WFO R10 ACR DIALER INTG UPG	Server	248065	AV WFO R10 ACR DIALER INTG UPG	Server	267605	WFO R11 ACR DIALER INTG UPG
				Contact Recording / Compliance Recording			Contact Recording / Compliance Recording

Color Legend			More complete 10.x code list			11.0 code list	
Contact Recording / Compliance Recording			248066	AV WFO R10 COMP RCD PKG	Channe	267606	WFO R11 CR PKG
248066	AV WFO R10 COMP RCD PKG	Channe	248067	AV WFO R10 COMP RCD PKG ENTL	Channe	267607	WFO R11 CR PKG ENTL
248067	AV WFO R10 COMP RCD PKG ENTITLE	Channe	248068	AV WFO R10 COMP RCD PKG UPG	Channe	267608	WFO R11 CR PKG UPG
248068	AV WFO R10 COMP RCD PKG UPG	Channe	263535	AV WFO R10 COMP RCD PKG CN IN	Channe	269192	WFO R11 CR PKG CH IN
248069	AV WFO R10 REDUN COMP RCD PKG	Channe	263536	AV WFO R10 COMP RCD PKG UPG CHINA INDIA	Channe	269193	WFO R11 CR PKG CH IN ENTL
248070	AV WFO R10 REDUN COMP RCD PKG ENTITLE	Channe	248069	AV WFO R10 REDUN COMP RCD PKG	Channe	269194	WFO R11 CR PKG CH IN UPG
248071	AV WFO R10 REDUN COMP RCD PKG UPG	Channe	248070	AV WFO R10 REDUN COMP RCD PKG ENTL	Channe	267609	WFO R11 REDUN CR PKG
248072	AV WFO R10 ADV COMP PKG	Channe	248071	AV WFO R10 REDUN COMP RCD PKG UPG	Channe	267610	WFO R11 REDUN CR PKG ENTL
248073	AV WFO R10 ADV COMP PKG ENTITLE	Channe	263537	AVWFOR10 REDUNCOMPRCDPKG CHINA INDIA	Channe	267611	WFO R11 REDUN CR PKG UPG
248074	AV WFO R10 ADV COMP PKG UPG	Channe	263538	AV WFO R10 REDUN COMP RCD UPG CHINA INDIA	Channe	269195	WFO R11 REDUN CR PKG CH IN
248075	AV WFO R10 ADV COMP PKG REDUN	Channe	248072	AV WFO R10 ADV COMP PKG	Channe	269196	WFO R11 REDUN CR PKG CH IN ENTL
248076	AV WFO R10 ADV COMP PKG REDUN/E	Channe	248073	AV WFO R10 ADV COMP PKG ENTL	Channe	269197	WFO R11 REDUN CR PKG CH IN UPG
248077	AV WFO R10 ADV COMP PKG REDUN UPG	Channe	248074	AV WFO R10 ADV COMP PKG UPG	Channe	267600	WFO R11 PASSIVE CR PKG
248078	AV WFO R10 TEL REPLAY PT	Channe	269203	AV WFO R10 ADV CR PKG CN IN	Channe	267612	WFO R11 REDUN PASSIVE CR PKG
248079	AV WFO R10 TEL REPLAY PT ENTITLE	Channe	248075	AV WFO R10 ADV COMP PKG REDUN	Channe	267618	WFO R11 TEL REPLAY PT
248080	AV WFO R10 TEL REPLAY PT UPG	Channe	269204	AV WFO R10 REDUN ADV CR PKG CN IN	Channe	267621	WFO R11 CNTL REPLAY SRVR SFTW
248084	AV WFO R10 CNTL REPLAY SRVR SFTW	Server	248076	AV WFO R10 ADV COMP PKG REDUN ENTL	Channe	267624	WFO R11 ARCHIVE MGR
284085	AV WFO R10 CNTL REPLAY SRVR SFTW/E	Server	248077	AV WFO R10 ADV COMP PKG REDUN UPG	Channe	267625	WFO R11 ARCHIVE MGR ENTL
284086	AV WFOR10 CNTRL REPLAY SRVR SFTW UPG	Server	248078	AV WFO R10 TEL REPLAY PT	Channe	267626	WFO R11 ARCHIVE MGR UPG
248087	AV WFO R10 ARCHIVE MGR PKG ADD-ON	Server	248079	AV WFO R10 TEL REPLAY PT ENTL	Channe	267627	WFO R11 TEL REPLAY CR PKG
248088	AV WFO R10 ARCHIVE MGR PKG ADD-ON/E	Server	248080	AV WFO R10 TEL REPLAY PT UPG	Channe	267628	WFO R11 TEL REPLAY CR PKG ENTL
248089	AV WFO R10 ARCHIVE MGR PKG ADD UPG	Server	248084	AV WFO R10 CNTL REPLAY SRVR SFTW	Server	267629	WFO R11 TEL REPLAY CR PKG UPG
248090	AV WFO R10 TEL REPLAY COMP PKG ADD	Server	248085	AV WFO R10 CNTL REPLAY SRVR SFTW ENTL	Server	267630	WFO R11 CR/QM ENCRYPTION
248091	AV WFO R10 TEL RPLY COMP PKG ADDON/E	Server	248086	AV WFOR10 CNTRL REPLAY SRVR SFTW UPG	Server	267631	WFO R11 CR/QM ENCRYPTION ENTL
248092	AV WFO R10 TEL RPLY COMP PKG ADD UPG	Server	248087	AV WFO R10 ARCHIVE MGR PKG ADD-ON	Server	267632	WFO R11 CR/QM ENCRYPTION UPG
248093	AV WFO R10 QM/ACR ENCRPN OPT	Seat	248088	AV WFO R10 ARCHIVE MGR PKG ADD-ON ENTL	Server	267633	WFO R11 FULL TIME SCREEN RECORD
248094	AV WFO R10 QM/ACR ENCRPN OPT/E	Seat	248089	AV WFO R10 ARCHIVE MGR PKG ADD UPG	Server	267619	WFO R11 FULL TIME SCREEN RECORD ENTL
248095	AV WFO R10 QM/ACR ENCRPN OPT UPG	Seat	248090	AV WFO R10 TEL REPLAY COMP PKG ADD	Server	267620	WFO R11 FULL TIME SCREEN RECORD UPG
263510	AV WFO R10.1 FULL TIME SCREEN RECORD	Seat	248091	AV WFO R10 TEL RPLY COMP PKG ADDON ENTL	Server	258647	VERINT DIR TO AVAYA CR/QM/WFM MIGRATION ENT
258647	VERINT DIR TO AV CR/QM/WFM MG ENT	Channe/Seat	248092	AV WFO R10 TEL RPLY COMP PKG ADD UPG	Server		Quality Monitoring
Quality Monitoring			248093	AV WFO R10 QM/ACR ENCRPN OPT	Seat	267634	WFO R11 QM PKG
248096	AV WFO R10 QLTY MON PKG	Seat	248094	AV WFO R10 QM/ACR ENCRPN OPT ENTL	Seat	267635	WFO R11 QM PKG ENTL

Color Legend			More complete 10.x code list			11.0 code list			
248097	AV WFO R10 QLTY MON PKG ENTITLE	Seat	248095	AV WFO R10 QM/ACR ENCRPN OPT UPG	Seat	267636	WFO R11 QM PKG UPG		
248098	AV WFO R10 QLTY MON PKG UPG	Seat	263510	AV WFO R10.1 FULL TIME SCREEN RECORD	Seat	270810	WFO R11 QM PKG CH IN		
248099	AV WFO R10 ADV QLTY PKG	Seat	258647	VERINT DIR TO AVAYA CR/QM/WFM MIGRATION ENT	Channel/Seat	270811	WFO R11 QM PKG CH IN ENTL		
248100	AV WFO R10 ADV QLTY PKG ENTITLE	Seat	Quality Monitoring				270812	WFO R11 QM PKG CH IN UPG	
248101	AV WFO R10 ADV QLTY PKG UPG	Seat	248096	AV WFO R10 QLTY MON PKG	Seat	267615	WFO R11 REDUN QM PKG		
248111	AV WFO R10 UNIFY/EWARE/VIEWR PKG ADD	Server	248097	AV WFO R10 QLTY MON PKG ENT	Seat	270813	WFO R11 REDUN QM PKG CH IN		
248112	AV WFO R10 UNFY/EWARE/VWR PKG ADD/E	Server	248098	AV WFO R10 QLTY MON PKG UPG	Seat	267637	WFO R11 ADV QM PKG		
248113	AV WFO R10 UNFY/EWARE/VWR PKG ADDUPG	Server	269205	AV WFO R10 QLTY MON PKG CN IN	Seat	267638	WFO R11 ADV QM PKG ENT		
248114	AV WFO R10 DIALER ADPTR FOR QM	Server	248099	AV WFO R10 ADV QLTY PKG	Seat	267639	WFO R11 ADV QM PKG UPG		
248115	AV WFO R10 DIALER ADPTR FOR QM/E	Server	248100	AV WFO R10 ADV QLTY PKG ENT	Seat	270814	WFO R11 ADV QM PKG CH IN		
248116	AV WFO R10 DIALER ADPTR FOR QM UPG	Server	248101	AV WFO R10 ADV QLTY PKG UPG	Seat	270815	WFO R11 ADV QM PKG CH IN ENTL		
248117	AV WFO R10 CNCT INTERACT EDIT PRODCR	Seat	269206	AV WFO R10 ADV QLTY PKG CN IN	Seat	270816	WFO R11 ADV QM PKG CH IN UPG		
248118	AV WFO R10 CNCT INTRACT EDIT PROD/E	Seat	248111	AV WFO R10 UNIFY ENTLWARE/VIEWR PKG ADD	Server	267673	WFO R11 REDUN ADV QM PKG		
248119	AV WFO R10 CNCT INTRACT EDIT PRODUPG	Seat	248112	AV WFO R10 UNFY ENTLWARE/VWR PKG ADD ENTL	Server	270816	WFO R11 REDUN ADV QM PKG CH IN		
248123	AV WFO R10 STRATEGIC PLANNER	Seat	248113	AV WFO R10 UNFY ENTLWARE/VWR PKG ADDUPG	Server	267640	WFO R11 UNIFY EWARE VIEWER		
248124	AV WFO R10 STRATEGIC PLANNER ENTL	Seat	248114	AV WFO R10 DIALER ADPTR FOR QM	Server	267643	WFO R11 DIALER ADPTR FOR QM		
248125	AV WFO R10 STRATEGIC PLANNER UPG	Seat	248115	AV WFO R10 DIALER ADPTR FOR QM ENTL	Server	267644	WFO R11 DIALER ADPTR FOR QM ENTL		
248126	AV WFO R10 APP ANALYSIS	Seat	248116	AV WFO R10 DIALER ADPTR FOR QM UPG	Server	267645	WFO R11 DIALER ADPTR FOR QM UPG		
248127	AV WFO R10 APP ANALYSIS ENTITLE	Seat	248117	AV WFO R10 CONTENT PRODUCER	Seat	267646	WFO R11 CONTENT PRODUCER		
248128	AV WFO R10 APP ANALYSIS UPG	Seat	248118	AV WFO R10 CONTENT PRODUCER ENTL	Seat	267647	WFO R11 CONTENT PRODUCER ENTL		
248129	AV WFO R10 CNCT VISUALIZATION	Seat	248119	AV WFO R10 CONTENT PRODUCER UPG	Seat	267648	WFO R11 CONTENT PRODUCER UPG		
248130	AV WFO R10 CNCT VISUALIZATION ENTITLE	Seat	248120	AV WFO R10 STRATEGIC PLANNER	Seat	267649	WFO R11 STRATEGIC PLANNER		
248131	AV WFO R10 CNCT VISUALIZATION UPG	Seat	248121	AV WFO R10 STRATEGIC PLANNING ENTL	Seat	267650	WFO R11 STRATEGIC PLANNER ENTL		
Reporting			248122	AV WFO R10 STRATEGIC PLANNER UPG	Seat	267651	WFO R11 STRATEGIC PLANNER UPG		
263923	AV WFO R10.1 AD-HOC RPT ADDL USER	Seat	248123	AV WFO R10 DESKTOP APP MGR	Seat	267652	WFO R11 APPL ANLYS		
263924	AV WFO R10.1 AD-HOC RPT ADDLUSER ENT	Seat	248124	AV WFO R10 DSKTP APP MGR ENTL	Seat	267653	WFO R11 APPL ANLYS ENTL		
263925	AV WFO R10.1 AD-HOC RPT ADDLUSER UPG	Seat	248125	AV WFO R10 DESKTOP APP MGR UPG	Seat	267654	WFO R11 APPL ANLYS UPG		
263926	AV WFO R10.1 COGNOS RPT STUDIO	Seat	248126	AV WFO R10 CNCT VISUALIZATION	Seat	Reporting			
263927	AV WFO R10.1 COGNOS RPT STUDIO ENT	Seat	248127	AV WFO R10 CNCT VISUALIZATION ENTL	Seat	267655	WFO R11 AD-HOC RPT ADDL USER		
263928	AV WFO R10.1 COGNOS RPT STUDIO UPG	Seat	248128	AV WFO R10 CNCT VISUALIZATION UPG	Seat	267656	WFO R11 AD-HOC RPT ADDLUSER ENT		
Workforce Management			Reporting			267657	WFO R11 AD-HOC RPT ADDLUSER UPG		

Color Legend			More complete 10.x code list			11.0 code list		
248153	AV WFO R10 WORKFORCE MGMT PKG	Seat	263923	AV WFO R10.1 AD-HOC RPT ADDL USER	Seat	267658	WFO R11 COGNOS RPT STUDIO	
248154	AV WFO R10 WORKFORCE MGMT PKG ENTITLE	Seat	263924	AV WFO R10.1 AD-HOC RPT ADDLUSER ENT	Seat	267659	WFO R11 COGNOS RPT STUDIO ENT	
248155	AV WFO R10 WORKFORCE MGMT PKG UPG	Seat	263925	AV WFO R10.1 AD-HOC RPT ADDLUSER UPG	Seat	267660	WFO R11 COGNOS RPT STUDIO UPG	
248156	AV WFO R10 ADV WFM PKG	Seat	263926	AV WFO R10.1 COGNOS RPT STUDIO	Seat	Workforce Management		
248157	AV WFO R10 ADV WFM PKG ENTITLE	Seat	263927	AV WFO R10.1 COGNOS RPT STUDIO ENT	Seat	267661	WFO R11 WFM PKG	
248158	AV WFO R10 ADV WFM PKG UPG	Seat	263928	AV WFO R10.1 COGNOS RPT STUDIO UPG	Seat	267662	WFO R11 WFM PKG ENTL	
248162	AV WFO R10 WFM TIME OFF MGR PKG ADD	Seat	Workforce Management			267663	WFO R11 WFM PKG UPG	
248163	AV WFO R10 WFM TIMEOFFMGR PKG ADD/E	Seat	248153	AV WFO R10 WORKFORCE MGMT PKG	Seat	267691	WFO R11 REDUN WFM PKG	
248164	AV WFO R10 WFM TIMEOFFMGR PKG ADD UPG	Seat	248154	AV WFO R10 WORKFORCE MGMT PKG ENTL	Seat	267664	WFO R11 ADV WFM PKG	
248165	AV WFO R10 WFM SHIFT BID PKG ADD-ON	Seat	248155	AV WFO R10 WORKFORCE MGMT PKG UPG	Seat	267665	WFO R11 ADV WFM PKG ENTL	
248166	AV WFO R10 WFM SHIFT BID PKG ADDON/E	Seat	248156	AV WFO R10 ADV WFM PKG	Seat	267666	WFO R11 ADV WFM PKG UPG	
248167	AV WFO R10 WFM SHIFT BID PKG ADD UPG	Seat	248157	AV WFO R10 ADV WFM PKG ENTL	Seat	267713	WFO R11 REDUN ADV WFM PKG	
248168	AV WFO R10 WFM MULTIMED PKG ADD-ON	Seat	248158	AV WFO R10 ADV WFM PKG UPG	Seat	267667	WFO R11 WFM TIME OFF MGR	
248169	AV WFO R10 WFM MULTIMED PKG ADD-ON/E	Seat	248162	AV WFO R10 WFM TIME OFF MGR PKG ADD	Seat	267668	WFO R11 WFM TIME OFF MGR ENTL	
248170	AV WFO R10 WFM MULTIMED PKG UPG	Seat	248163	AV WFO R10 WFM TIMEOFFMGR PKG ADD ENTL	Seat	267669	WFO R11 WFM TIME OFF MGR UPG	
248171	AV WFO R10 WFM MULTISITE MGMT	Seat	248164	AV WFO R10 WFM TIMEOFFMGR PKG ADD UPG	Seat	267670	WFO R11 WFM SHIFT BIDDING	
248172	AV WFO R10 WFM MULTISITE MGMTENTITLE	Seat	248165	AV WFO R10 WFM SHIFT BID PKG ADD-ON	Seat	267671	WFO R11 WFM SHIFT BIDDING ENTL	
248173	AV WFO R10 WFM MULTISITE MGMT UPG	Seat	248166	AV WFO R10 WFM SHIFT BID PKG ADDON ENTL	Seat	267672	WFO R11 WFM SHIFT BIDDING UPG	
248174	AV WFO R10 ADV SCORECARD	Seat	248167	AV WFO R10 WFM SHIFT BID PKG ADD UPG	Seat	267676	WFO R11 WFM MULTISITE MGMT	
248175	AV WFO R10 ADV SCORECARD ENTITLE	Seat	248168	AV WFO R10 WFM MULTIMED PKG ADD-ON	Seat	267679	WFO R11 ADV SCORECARD	
248176	AV WFO R10 ADV SCORECARD UPG	Seat	248169	AV WFO R10 WFM MULTIMED PKG ADD-ON ENTL	Seat	267680	WFO R11 ADV SCORECARD ENTL	
258648	AV WFO R10 KPI DESIGN ADAPTER	Server	248170	AV WFO R10 WFM MULTIMED PKG UPG	Seat	267681	WFO R11 ADV SCORECARD UPG	
258649	AV WFO R10 KPI DESIGN ADAPTER ENT	Server	248171	AV WFO R10 WFM MULTISITE MGMT	Seat	267682	WFO R11 KPI DESIGN ADAPTER	
258650	AV WFO R10 KPI DESIGN ADAPTER UPG	Server	248172	AV WFO R10 WFM MULTISITE MGMT ENTL	Seat	267683	WFO R11 KPI DESIGN ADAPTER ENT	
248177	AV WFO R10 LESSON MGMT	Seat	248173	AV WFO R10 WFM MULTISITE MGMT UPG	Seat	267684	WFO R11 KPI DESIGN ADAPTER UPG	
248178	AV WFO R10 LESSON MGMT ENTITLE	Seat	248174	AV WFO R10 ADV SCORECARD	Seat	267685	WFO R11 LESSON MGMT	
248179	AV WFO R10 LESSON MGMT UPG	Seat	248175	AV WFO R10 ADV SCORECARD ENTL	Seat	267686	WFO R11 LESSON MGMT ENTL	
248180	AV WFO R10 COMP BASED LEARNING	Seat	248176	AV WFO R10 ADV SCORECARD UPG	Seat	267687	WFO R11 LESSON MGMT UPG	
248181	AV WFO R10 COMP BASED LEARNING/E	Seat	258648	AV WFO R10 KPI DESIGN ADAPTER	Server	267688	WFO R11 COMP BASED LEARNING	
248182	AV WFO R10 COMP BASED LEARNING UPG	Seat	258649	AV WFO R10 KPI DESIGN ADAPTER ENT	Server	267689	WFO R11 COMP BASED LEARNING ENTL	
263511	AV WFO R10.1 PERF MGMT COACHING	Seat	258650	AV WFO R10 KPI DESIGN ADAPTER UPG	Server	267690	WFO R11 COMP BASED LEARNING UPG	



Color Legend			More complete 10.x code list			11.0 code list		
263929	AV WFO R10.1 APPL LINK SRVR	Server	24817	AV WFO R10 LESSON MGMT	Seat	267	WFO R11 APPL LINK SRVR	692
263930	AV WFO R10.1 APPL LINK SRVR ENTITLE	Server	24817	AV WFO R10 LESSON MGMT ENTL	Seat	267	WFO R11 APPL LINK SRVR ENTL	693
263931	AV WFO R10.1 APPL LINK SRVR UPG	Server	24817	AV WFO R10 LESSON MGMT UPG	Seat	267	WFO R11 APPL LINK SRVR UPG	694
263932	AV WFO R10.1 ADV ADHERENCE	Seat	24818	AV WFO R10 COMP BASED LEARNING	Seat	267	WFO R11 ADV ADHERENCE	695
263933	AV WFO R10.1 ADV ADHERENCE ENTITLE	Seat	24818	AV WFO R10 COMP BASED LEARNING ENTL	Seat	267	WFO R11 ADV ADHERENCE ENTL	696
263934	AV WFO R10.1 ADV ADHERENCE UPG	Seat	24818	AV WFO R10 COMP BASED LEARNING UPG	Seat	267	WFO R11 ADV ADHERENCE UPG	697
Workforce Optimization Package (CR + QM + WFM)			26351	AV WFO R10.1 PERF MGMT COACHING	Seat	Workforce Optimization Package (CR + QM + WFM)		
248183	AV WFO R10 WORKFORCE OPT PKG	Seat	26392	AV WFO R10.1 APPL LINK SRVR	Server	267	WFO R11 WFO PKG	698
248184	AV WFO R10 WORKFORCE OPT PKG ENTITLE	Seat	26393	AV WFO R10.1 APPL LINK SRVR ENTL	Server	267	WFO R11 WFO PKG ENTL	699
248185	AV WFO R10 WORKFORCE OPT PKG UPG	Seat	26393	AV WFO R10.1 APPL LINK SRVR UPG	Server	267	WFO R11 WFO PKG UPG	700
248186	AV WFO R10 ADV WFO PKG	Seat	26393	AV WFO R10.1 ADV ADHERENCE	Seat	267	WFO R11 REDUN WFO PKG	716
248187	AV WFO R10 ADV WFO PKG ENTITLE	Seat	26393	AV WFO R10.1 ADV ADHERENCE ENTL	Seat	267	WFO R11 ADV WFO PKG	701
248188	AV WFO R10 ADV WFO PKG UPG	Seat	26393	AV WFO R10.1 ADV ADHERENCE UPG	Seat	267	WFO R11 ADV WFO PKG ENTL	702
Desktop and Process Analytics			Workforce Optimization Package (CR + QM + WFM)			267	WFO R11 ADV WFO PKG UPG	703
263512	AV WFO R10.1 DESKTOP APPLIC TRACKER	Seat	24818	AV WFO R10 WORKFORCE OPT PKG	Seat	267	WFO R11 REDUN ADV WFO PKG	719
263513	AV WFO R10.1 ADV DESKTOP ANALYTICS	Seat	24818	AV WFO R10 WORKFORCE OPT PKG ENTL	Seat	Desktop and Process Analytics		
263935	AV WFO R10.1 ADV DESKTOP ANALYTICS ENT	Seat	24818	AV WFO R10 WORKFORCE OPT PKG UPG	Seat	267	WFO R11 DSKTP APPL TRACKER	704
263936	AV WFO R10.1 ADV DESKTOP ANALYTICS UPG	Seat	24818	AV WFO R10 ADV WFO PKG	Seat	270	WFO R11 DSKTP APPL TRACKER ENTL	818
263514	AV WFO R10.1 STR DESKTOP PROCESS ANALYTICS	Seat	24818	AV WFO R10 ADV WFO PKG ENTL	Seat	270	WFO R11 DSKTP APPL TRACKER UPG	819
263937	AV WFO R10.1 AET TO STR DPA UP-BUY	Seat	24818	AV WFO R10 ADV WFO PKG UPG	Seat	267	WFO R11 ADV DSKTP ANALYTICS	705
263938	AV WFO R10.1 APP ANALYSIS TO STR DPA UP-BUY	Seat	Desktop and Process Analytics			267	WFO R11 ADV DSKTP ANALYTICS ENTL	706
Speech Analytics			26351	AV WFO R10.1 DESKTOP APPLIC TRACKER	Seat	267	WFO R11 ADV DSKTP ANALYTICS UPG	707
248132	AV WFO R10 SPEECH ESSENTIALS	Seat	26351	AV WFO R10.1 ADV DESKTOP ANALYTICS	Seat	267	WFO R11 STR DSKTP PROCESS ANALYTICS	708
248133	AV WFO R10 SPEECH ESSENTIALS ENTITLE	Seat	26393	AV WFO R10.1 ADV DESKTOP ANALYTICS ENTL	Seat	270	WFO R11 STR DSKTP PROC ANALYTICS ENTL	820
248134	AV WFO R10 SPEECH ESSENTIALS UPG	Seat	26393	AV WFO R10.1 ADV DESKTOP ANALYTICS UPG	Seat	270	WFO R11 STR DSKTP PROC ANALYTICS UPG	821
248135	AV WFO R10 SPEECH ADVANCED	Seat	26351	AV WFO R10.1 STR DESKTOP PROCESS ANALYTICS	Seat	267	WFO R11 AET TO STRATEGIC DPA UP-BUY	709
248136	AV WFO R10 SPEECH ADVANCED ENTITLE	Seat	26393	AV WFO R10.1 AET TO STR DPA UP-BUY	Seat	267	WFO R11 APP ANALYS TO STR DPA UP-BUY	710
248137	AV WFO R10 SPEECH ADVANCED UPG	Seat	26393	AV WFO R10.1 APP ANALYSIS TO STR DPA UP-BUY	Seat	270	WFO R11 DATA PROPAGATE PROC GUIDE	822
263467	AV WFO R10.1 INTERACT DATAEXPORT MGR	Seat	Speech Analytics			Speech Analytics		
263939	AV WFO R10.1 SPH ANALYS LANG ADD	Seat	24813	AV WFO R10 SPEECH ESSENTIALS	Seat	270	WFO R11 SPEECH ESSENTIALS	262
263940	AV WFO R10.1 SPH ANALYS LANG ADD ENT	Seat	24813	AV WFO R10 SPEECH ESSENTIALS ENTL	Seat	270	WFO R11 SPEECH ESSENTIALS ENTL	263

Color Legend			More complete 10.x code list			11.0 code list		
263941	AV WFO R10.1 SPH ANALYS LANG ADD UPG	Seat	248134	AV WFO R10 SPEECH ESSENTIALS UPG	Seat	270264	WFO R11 SPEECH ESSENTIALS UPG	
Customer Feedback			248135	AV WFO R10 SPEECH ADVANCED	Seat	270265	WFO R11 SPEECH ADVANCED	
248141	AV WFO R10 CUSTMR FDBCK ADVANCED	Seat	248136	AV WFO R10 SPEECH ADVANCED ENTL	Seat	270266	WFO R11 SPEECH ADVANCED ENTL	
248142	AV WFO R10 CUSTMR FDBCK ADVANCED/E	Seat	248137	AV WFO R10 SPEECH ADVANCED UPG	Seat	270267	WFO R11 SPEECH ADVANCED UPG	
248143	AV WFO R10 CUSTMR FDBCK ADVANCED UPG	Seat	263467	AV WFO R10.1 INTERACT DATAEXPORT MGR	Seat	270268	WFO R11 INTERACT DATAEXPORT MGR	
248147	AV WFO R10 CUSTMR SEGMENT RPTG	Seat	263939	AV WFO R10.1 SPH ANALYS LANG ADD	Seat	270377	WFO R11 INTERACT DATAEXPORT MGR ENTL	
248148	AV WFO R10 CUSTMR SEGMENT RPTG/E	Seat	263940	AV WFO R10.1 SPH ANALYS LANG ADD ENT	Seat	270378	WFO R11 INTERACT DATAEXPORT MGR UPG	
248149	AV WFO R10 CUSTMR SEGMENT RPTG UPG	Seat	263941	AV WFO R10.1 SPH ANALYS LANG ADD UPG	Seat	270269	WFO R11 SPH ANALYTICS LANG ADD	
248150	AV WFO R10 EMAIL FDBCK MGMT RESEARCH	Seat	Customer Feedback			270270	WFO R11 SPH ANALYTICS LANG ADD ENTL	
248151	AV WFO R10 EMAIL FDBCK MGMT RSRCH/E	Seat	248141	AV WFO R10 CUSTMR FDBCK ADVANCED	Seat	270271	WFO R11 SPH ANALYS LANG ADD UPG	
248152	AV WFO R10 EMAIL FDBCK MGMT RSRCHUPG	Seat	248142	AV WFO R10 CUSTMR FDBCK ADVANCED ENTL	Seat	Customer Feedback		
Base Package Up-Buys			248143	AV WFO R10 CUSTMR FDBCK ADVANCED UPG	Seat	267721	WFO R11 CUSTMR FDBCK ADVANCED	
263942	AV WFO R10 COMP TO ADVCOMP PKG UPBUY	Channel	248147	AV WFO R10 CUSTMR SEGMENT RPTG	Seat	267722	WFO R11 CUSTMR FDBCK ADVANCED ENTL	
248105	AV WFO R10 COMP TO QM PKG UP-BUY	Seat	248148	AV WFO R10 CUSTMR SEGMENT RPTG ENTL	Seat	267723	WFO R11 CUSTMR FDBCK ADVANCED UPG	
248108	AV WFO R10 COMP TO ADV QM PKG UP-BUY	Seat	248149	AV WFO R10 CUSTMR SEGMENT RPTG UPG	Seat	267724	WFO R11 CUSTMR SEGMENT RPTG	
248189	AV WFO R10 COMP TO WFO UP-BUY	Seat	248150	AV WFO R10 EMAIL FDBCK MGMT RESEARCH	Seat	267725	WFO R11 CUSTMR SEGMENT RPTG ENTL	
262575	AV WFO R10 COMP TO ADV WFO UP-BUY	Seat	248151	AV WFO R10 EMAIL FDBCK MGMT RSRCH ENTL	Seat	267726	WFO R11 CUSTMR SEGMENT RPTG UPG	
262576	AV WFO R10 ADV COMP TO ADV QM UP-BUY	Seat	248152	AV WFO R10 EMAIL FDBCK MGMT RSRCHUPG	Seat	267727	WFO R11 EMAIL FDBCK MGMT RESEARCH	
262577	AV WFO R10 ADV COMP TO ADV WFO UP-BUY	Seat	Base Package Up-Buys			267728	WFO R11 EMAIL FDBCK MGMT RSRCH ENTL	
248102	AV WFO R10 QM TO ADV QM PKG UP-BUY	Seat	263942	AV WFO R10 COMP TO ADVCOMP PKG UPBUY	Channel	267729	WFO R11 EMAIL FDBCK MGMT RSRCHUPG	
248192	AV WFO R10 QM TO WFO UP-BUY	Seat	248105	AV WFO R10 COMP TO QM PKG UP-BUY	Seat	Base Package Up-Buys		
262573	AV WFO R10 QM TO ADV WFO UP-BUY	Seat	248108	AV WFO R10 COMP TO ADV QM PKG UP-BUY	Seat	267731	WFO R11 CR TO QM PKG UP-BUY	
262574	AV WFO R10 ADV QM TO ADV WFO UP-BUY	Seat	248189	AV WFO R10 COMP TO WFO UP-BUY	Seat	267732	WFO R11 CR TO ADV QM PKG UP-BUY	
248159	AV WFO R10 WFM TO ADV WFM PKG UP-BUY	Seat	262575	AV WFO R10 COMP TO ADV WFO UP-BUY	Seat	267733	WFO R11 CR TO WFO UP-BUY	
248195	AV WFO R10 WFM TO WFO UP-BUY	Seat	262576	AV WFO R10 ADV COMP TO ADV QM UP-BUY	Seat	267734	WFO R11 CR TO ADV WFO UP-BUY	
262578	AV WFO R10 WFM TO ADV WFO UP-BUY	Seat	262577	AV WFO R10 ADV COMP TO ADV WFO UP-BUY	Seat	267735	WFO R11 ADV CR TO ADV QM PKG UP-BUY	
262579	AV WFO R10 ADV WFM TO ADV WFO UP-BUY	Seat	248102	AV WFO R10 QM TO ADV QM PKG UP-BUY	Seat	267736	WFO R11 ADV CR TO ADV WFO UP-BUY	
266030	AV WFO R10 WFO TO ADV WFO UP-BUY	Seat	248192	AV WFO R10 QM TO WFO UP-BUY	Seat	267737	WFO R11 QM TO ADV QM PKG UP-BUY	
Lab/Trial (see note 4)			262573	AV WFO R10 QM TO ADV WFO UP-BUY	Seat	267738	WFO R11 QM TO WFO UP-BUY	
248198	AV WFO R10 COMP RECORDING CUST LAB	Channel	262574	AV WFO R10 ADV QM TO ADV WFO UP-BUY	Seat	267739	WFO R11 QM TO ADV WFO UP-BUY	
248199	AV WFO R10 QM CUST LAB	Seat	248159	AV WFO R10 WFM TO ADV WFM PKG UP-BUY	Seat	267740	WFO R11 ADV QM TO ADV WFO UP-BUY	
248200	AV WFO R10 WORKFORCE MGMT CUST LAB	Seat	248195	AV WFO R10 WFM TO WFO UP-BUY	Seat	267741	WFO R11 WFM TO ADV WFM PKG UP-BUY	
248201	AV WFO R10 WORKFORCE OPT PTNR LAB	Seat	262578	AV WFO R10 WFM TO ADV WFO UP-BUY	Seat	267742	WFO R11 WFM TO WFO UP-BUY	

Color Legend			More complete 10.x code list			11.0 code list		
248202	AV WFO R10 WORKFORCE OPT CUST LAB	Seat	262579	AV WFO R10 ADV WFM TO ADV WFO UP-BUY	Seat	267743	WFO R11 WFM TO ADV WFO UP-BUY	
AACC 6.1 codes for SIP recording with either Avaya WFO & non-Avaya (3rd-party) WFO solution						267744	WFO R11 ADV WFM TO ADV WFO UP-BUY	
264920	AACC NODAL WFO INTERFACE	Seat	Lab/Trial (see note 4)			267745	WFO R11 WFO TO ADV WFO UP-BUY	
264921	AACC NODAL WFO INTERFACE - 3RD-PARTY	Seat	248198	AV WFO R10 COMP RECORDING CUST LAB	Channe	Lab/Trial (see note 4)		
AACC 6.1 codes for WFO 10.1 s/w in mid-size market applications						267746	WFO R11 ADV CR PKG CUST LAB	
263943	AV WFO R10.1 AACC ESS WFM EXPRS	Seat	248200	AV WFO R10 WORKFORCE MGMT CUST LAB	Seat	267747	WFO R11 ADV QM PKG CUST LAB	
263945	AV WFO R10.1 ENT WFM EXPRS MIG CCE	Seat	248201	AV WFO R10 WORKFORCE OPT PTNR LAB	Seat	267748	WFO R11 ADV WFM PKG CUST LAB	
263946	AV WFO R10.1 WFM EXPRS MIG CCE ENT	Seat	248202	AV WFO R10 WORKFORCE OPT CUST LAB	Seat	267749	WFO R11 ADV WFO PKG PTNR LAB	
263947	AV WFO R10.1 AACC ESS CALL RCDG PT	Channe	WFO 10.0 s/w for CCE 5.x and 4.x when the 5.x release - GA was Aug'10			267750	WFO R11 ADV WFO PKG CUST LAB	
263948	AV WFO R10.1 ENT CALL RCDG MIG CCE	Channe	245388	CCE R5 WORKFORCE MGMT EXPRESS LIC	Seat	WFO R11 for AACC Midsize Enterprise (Bundled offer)		
263949	AV WFO R10.1 CALL RCDG MIG CCE ENT	Channe	245387	CCE R5 CALL RECORDING LIC	Seat	270687	WFO R11 CR MIDSIZE ENTPRS	
			263943	AACC R6 WFO R10 ESS WFM EXPRS	Seat		WFO R11 MIDMARKET QM /E	
			263945	AACC R6 WFO R10 ESS WFM EXPRS MIGCCE	Seat		WFO R11 MIDMARKET WFM /E	
			263946	AACC R6 WFO R10 WFM EXP MIG CCE ENT	Seat			
			263947	AACC R6 WFO R10 ESS CALL RCDG PT	Channe			
			263948	AACC R6 WFO R10 ENT CALL RCDG MIGCCE	Channe		This shading represents new codes added for 11.0	
			263949	AACC R6 WFO R10 CALL RCDG MIGCCE ENT	Channe			
			WFO 10.1 for AACC 6 Essential Plus bundle offer					
			268921	AV WFO R10.1.2 CR MIDSIZE ENTPRS	Channe			





# Chapter 6.

## Document History

---

## 6. Document History

Date	Issue	Changes
10th December 2013	07g	<ul style="list-style-type: none"><li>• Corrected name of applications download menu to <b>AppCenter</b>.</li><li>•</li></ul>
12th December 2013	07h	<ul style="list-style-type: none"><li>• Minor spelling corrections.</li></ul>
13th December 2013	07i	<ul style="list-style-type: none"><li>• Minor spelling corrections.</li><li>• Correct browser support statement to Internet Explorer 8, 9 and 10.</li><li>• Correct the IP Office Release 9.0 license requirements for Server Edition support of Contact Store for IP Office and Contact Recorder for IP Office.</li></ul>
8th January 2014	07j	<ul style="list-style-type: none"><li>• Minor spelling corrections.</li></ul>
16th January 2014	07k	<ul style="list-style-type: none"><li>• Minor spelling corrections.</li></ul>
24th January 2014	07l	<ul style="list-style-type: none"><li>• Minor corrections.</li></ul>

# Index

## 9

9444 13  
9888 13

## A

Account Code 39  
Action Data 36  
active during 36  
ActiveX 13  
Additional documentation 12  
Agent Mode 36  
Automatic 39  
Automatic call recording 9

## B

BIOS 18  
Boot  
    BIOS order 18  
Browser 13  
Bulletins 12  
Button Programming  
    Select 36  
Button Programming tab 36  
Button Programming window 36

## C

call 39  
    pressed during 36  
call involving 36  
Call Recording 9, 36  
Call Route  
    Incoming 39  
call This 36  
CallRecord 36  
CentOS  
    Compatibility 11  
channels 39  
Codec 13  
Compatibility 11  
Contact Recorder for IP Office 9  
Create  
    DVD 18  
Create a USB device 19

## D

Default  
    Password 25  
Default Recording 39  
Disk Space 11  
DSS 36  
DSS key  
    set 36  
DSS key during 36  
DVD 18  
DVD Drive 11

## E

Explorer 13

## F

Force Account Code 36  
Func 36

## G

G.711 13  
G.726 13  
G.729 13

## H

Hard Disk 11  
Headless 11

## I

Ignite 22  
Incoming Call Route 39  
Internet Explorer 13

## L

Line Group ID 36  
Linux 11  
    Installation 20  
Locale 36  
Login 25

## M

Manual Call Recording  
    Starting 36  
Manual Recording Mailbox 36  
Manual Recording Options  
    Setting 36  
Memory 11  
Menu key 36

## O

Operating System 11

## P

Password  
    Default 25  
PC Requirements 11  
Phone Manager 36  
Phone Manager Pro 36  
Playback 13  
Priority 39  
Processor 11

## R

RAM 11  
Recor 36  
Record Call 36  
Recording 9  
Recording Library 36  
Recording Library options 36  
Recording Warning 36  
Related documents 12  
Requirements 11  
Role 22  
Root password  
    Set 22

## S

Series 36  
Server  
    Ignite 22  
    Role 22  
    Type 22  
Set  
    Root password 22  
Shortcode 36  
SoftConsole 36  
Software  
    Unetbootin 17, 19  
    USB 17, 19  
Specification 11  
Start Recording 36  
Stop Recording 36  
syslinux.cfg 19

---

## T

Technical bulletins 12

Transfer 39

Type 22

## U

USB

    Create a bootable... 19

    Software 17, 19

user presses 36

Using DSS Keys 36

Using Short Codes 36

## V

Voice Recording

    Select 36

Voice Recording Library 36

VRL 36

VRL application 36



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. The company reserves the right to make alterations or amendments to the detailed specifications at its discretion. The publication of information in this document does not imply freedom from patent or other protective rights of Avaya or others.

All trademarks identified by the ® or ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners.

This document contains proprietary information of Avaya and is not to be disclosed or used except in accordance with applicable agreements.

© 2014 Avaya Inc. All rights reserved.