



Avaya Solution & Interoperability Test Lab

Application Notes for Phonestat with Avaya IP Office 9.0 Using Voicemail Pro – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Phonestat to interoperate with Avaya IP Office 9.0 using Voicemail Pro. Phonestat is a voice recording application which provides call recordings by obtaining recorded wave files from the Avaya Voicemail Pro Voice Resource Library (VRL) directory, and makes these available to users.

Phonestat obtains and compresses voice call recording wave files from Avaya IP Office Voicemail Pro, and makes the recordings available to users via the Phonestat web-based interface.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for Phonestat to interoperate with Avaya IP Office 9.0 using Voicemail Pro. Phonestat is a voice recording application and a cloud based tool that makes it easy to rate and share the quality of phone calls to pinpoint training needs in a contact center environment.

In the compliance testing, Phonestat obtained and compressed call recording wave files from Avaya IP Office Voicemail Pro, and made the recordings available to users via the Phonestat web-based interface.

A recording user was configured on Avaya IP Office, and the user's mailbox was configured to be the destination for all call recordings. Phonestat media agent obtained the call recording wave files from the recording user's mailbox on Avaya IP Office Voicemail Pro and compressed the recordings to MP3 format. These recordings are sent to the Phonestat cloud account so that they can be reviewed. For compliance or privacy conscious users the agent has the ability to be configured to use "Local Storage". This allows administrators to direct the media storage to a UNC path rather than the phonestat cloud.

2. General Test Approach and Test Results

The feature test cases were performed manually. Each call was handled manually at the user agent with generation of unique audio content for the recordings. Necessary user actions such as hold and reconnect, transfer and conference were performed from the user telephone to test the various call scenarios.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet cable to the server installed with Phonestat application.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following from Phonestat:

- Handling, reporting, and playback of call recording wave files for various call scenarios including external, inbound, outbound, drop, hold/reconnect, blind/attended transfer, blind/attended conference, voicemail coverage, hunt group, hunt group queuing, park/unpark simultaneous users, simultaneous calls, mobile twinning, and using softphone as teleworker.

The serviceability testing focused on verifying the ability of Phonestat to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cable to the Phonestat server.

2.2. Test Results

All test cases were executed and verified. The following were observations on Phonestat from the compliance testing.

- For outbound calls, certain call legs of transfer and conference scenarios, the Phonestat web-based interface does not show the user extension information which may made it difficult to identify the call with only date and time stamp if the volume of call is large.
- With Phonestat and Voicemail Pro installed on the same server, any network connection issue with the server will result in recordings that are captured before the link failure to be available only. If that is a concern, Phonestat and Avaya IP Office Voicemail Pro application must be installed on separate server.

2.3. Support

Technical support on Phonestat can be obtained through the following:

- **Phone:** +61-2-8062 6767
- **Web:** <http://support.phonestat.com>

3. Reference Configuration

The configuration used for the compliance testing is shown below. IP Office Voicemail Pro was used for call scenarios involving voicemail. Phonestat and IP Office Voicemail Pro are installed on the same Microsoft Windows 2008 R2 server. A Windows XP PC is used to run Avaya IP Office Video softphone for Teleworkers and can be used to access the Phonestat web-based interface via the internet.

The detailed administration of general contact center devices such as hunt groups and agents are assumed to be in place, and are not covered in these Application Notes. Also, installation and setup of IP Office Voicemail Pro, trunk and routing are also assumed to be in place, and are also not covered in these Application Notes.

In the compliance testing, Phonestat captured call recordings for agent users shown in the table below.

Device Type	Extension
Hunt Group	200
User agents	301, 302, 305, 331, 354

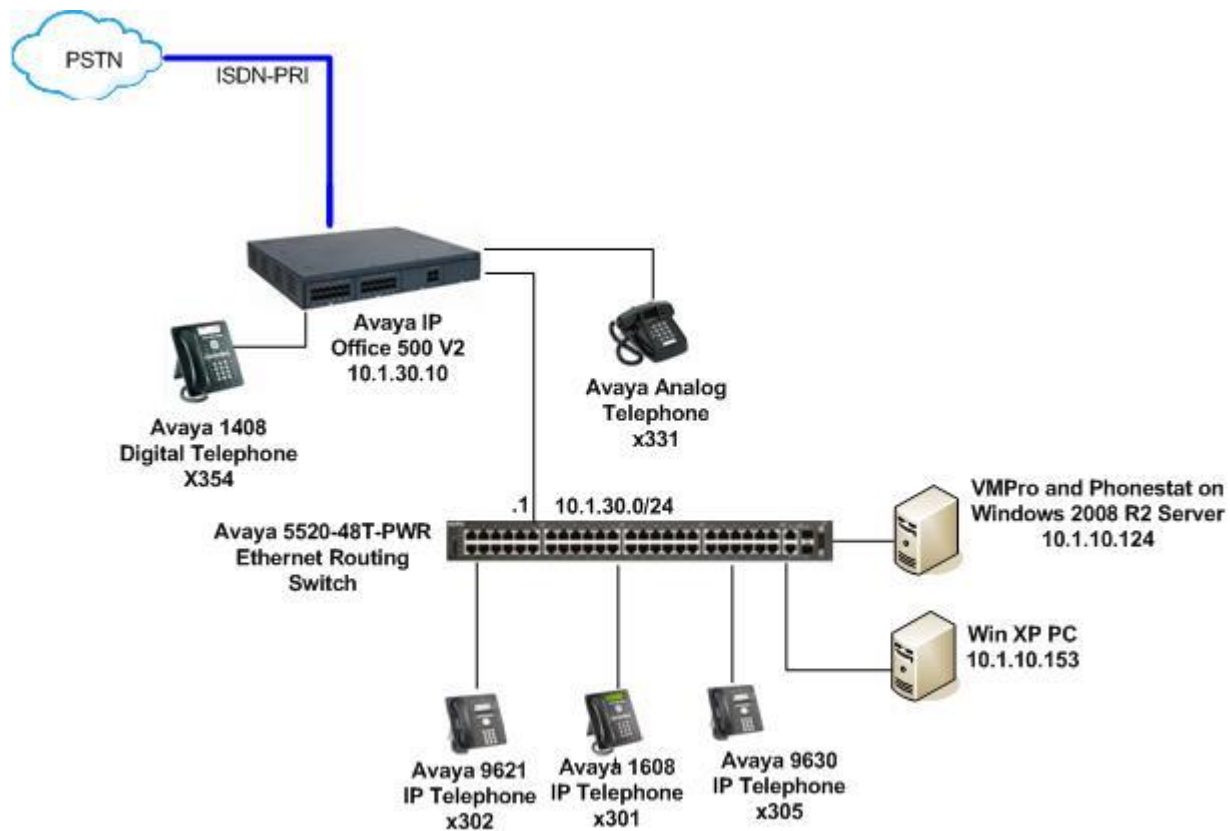


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment	Software
Avaya IP Office 500 V2	9.0.1.0.845
Avaya IP Office Voicemail Pro on Microsoft Windows 2008 Server with Service Pack 2	9.0.100.53
Avaya IP Office Video Softphone on Microsoft Windows XP with Service Pack 3	Win32_3.2.3.49_68975
Avaya 16xx Series IP Telephone (H.323)	1.340B
Avaya 96x1 Series IP Telephone (H.323)	6.3037
Avaya 96x0 Series IP Telephone (H.323)	3.210A
Avaya 14xx Series DCP Telephone	-
Avaya Analog Telephone	-
Phonestat on Microsoft Windows 2008 Server with Service Pack 2	2.0

Testing was performed with IP Office 500 v2 R9.0, but it also applies to IP Office Server Edition R9.0. Note that IP Office Server Edition requires an Expansion IP Office 500 v2 R9.0 to support analog or digital endpoints or trunks. IP Office Server Edition does not support TAPI Wave or Group Voicemail.

5. Configure Avaya IP Office

This section provides the procedures for configuring IP Office. The procedures include the following areas:

- Verify IP Office license
- Administer Recording Hunt Group
- Administer Recording User Agent

5.1. Verify IP Office License

From a PC running the IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the application. Select the proper IP Office system, and log in with appropriate credentials.

The **Avaya IP Office Manager** screen with the [9.0.100.845] is displayed. From the configuration tree in the left pane, select **License > Preferred Edition (VoiceMail Pro)** to display the **Preferred Edition (VoiceMail Pro)** screen in the right pane. Verify that the **License Status** is “Valid”.

The screenshot shows the Avaya IP Office Manager application window. The title bar reads "Avaya IP Office Manager SGIP500V2 [9.0.100.845] [Administrator/Administrator]". The menu bar includes File, Edit, View, Tools, and Help. Below the menu bar is a toolbar with various icons. The main window is divided into two panes. The left pane, titled "IP Offices", contains a tree view with the following structure: BOOTP (2), Operator (3), SGIP500V2, System (1), Line (7), Control Unit (6), Extension (47), User (45), Group (1), Short Code (70), Service (0), RAS (1), Incoming Call Route (6), 1, 0 302, 0 305, 0 331, 0 354, 0 68731233, WanPort (0), Directory (4), Time Profile (0), Firewall Profile (1), IP Route (2), Account Code (3), License (31), Tunnel (0), User Rights (14), ARS (2), and Location (0). The right pane, titled "License", contains a table with the following columns: Feature, License Key, Instances, Status, Expiry Date, and Source. The table lists various licenses, including Avaya IP endpoints, Avaya Softphone License, CTI Link Pro, DECT Integration (ports), Essential Edition, Essential Edition Additional Voicemail..., IP500 Universal PRI (Additional chan...), IP500 Voice Networking Channels, Mobile Worker, Office Worker, Phone Manager Pro, Phone Manager Pro (per seat), Phone Manager Pro IP Audio Enabled..., Power User, Preferred Edition (VoiceMail Pro), Preferred Edition Additional Voicemail..., R8+ Preferred Edition (VM Pro), Receptionist, SIP Trunk Channels, Software Upgrade 255, Teleworker, UMS Web Services, VMPro Networked Messaging, VMPro TTS (Generic), and VMPro TTS (Scansoft). The "Preferred Edition (VoiceMail Pro)" license is highlighted with a red box, showing a status of "Valid".

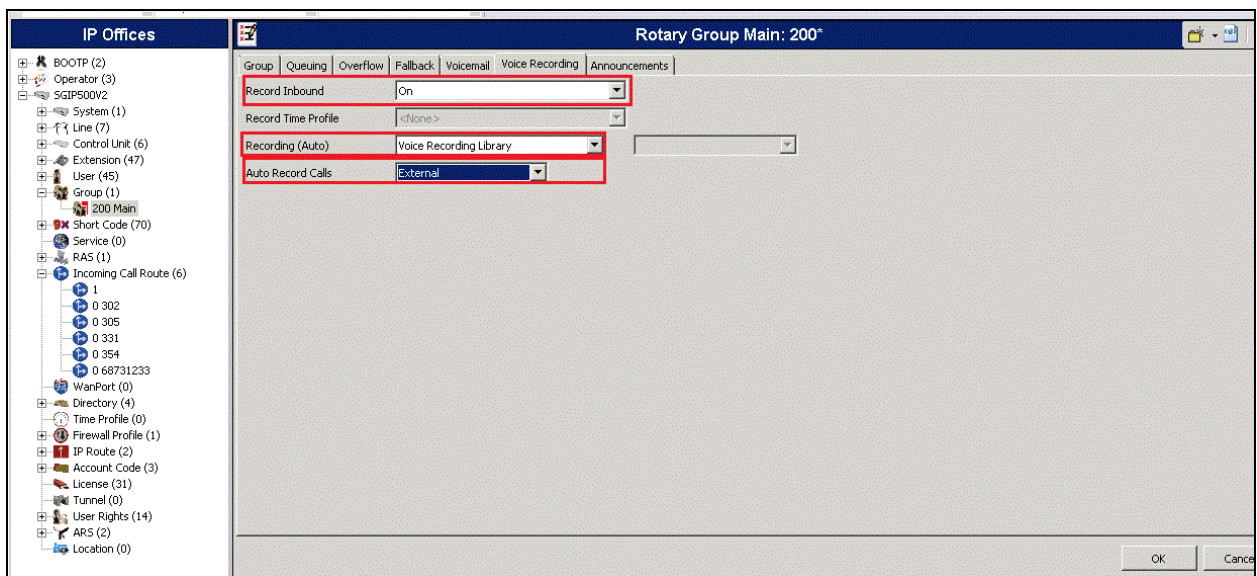
Feature	License Key	Instances	Status	Expiry Date	Source
Avaya IP endpoints	Virtual Avaya IP Endpoints	12	Valid	Never	Virtual
Avaya Softphone License	IXQPd4d8t5_2t5@gW5xmHh9Nw_oKP_B	255	Valid	Never	ADI Nodal
CTI Link Pro	DvNjO55xt5E0qdJHQRe_HyRVd3rJDRLc	255	Valid	Never	ADI Nodal
DECT Integration (ports)	aTujdM6zvvvNAkxW1DxslJ6VegxVKJM1	255	Obsolete	Never	ADI Nodal
Essential Edition	hXhkvL6otvUusMZWBYxk5_ZLpkdbIMo1	255	Valid	Never	ADI Nodal
Essential Edition Additional Voicemail ...	niXgtxdyXdbeSL3Wwp6mvisEhcFtCV9	255	Valid	Never	ADI Nodal
IP500 Universal PRI (Additional chan...	K4N5LDyww53K2Do_BUxGmdFVw9NjJLC	255	Valid	Never	ADI Nodal
IP500 Voice Networking Channels	K45T5g6wxdjx2@78QncLB8rcgxxK70W	255	Valid	Never	ADI Nodal
Mobile Worker	2vNfVt9WtvhIOM4SPQuvHPqdM6ZmDeLJ	255	Valid	Never	ADI Nodal
Office Worker	NAJagtVWASKu@5@mfPuw_N6VLgdMtuZQ	255	Valid	Never	ADI Nodal
Phone Manager Pro	O4YyGWbCXUkIzo1ggedkuqVL6LtpoC	255	Valid	Never	ADI Nodal
Phone Manager Pro (per seat)	Avl6cP8rvjAxI7WCJfum138OSw@xHfuu	255	Valid	Never	ADI Nodal
Phone Manager Pro IP Audio Enabled...	14u9sAdeV56uh@Heg2u16dZojh08Dfme	255	Valid	Never	ADI Nodal
Power User	rvNqOxo8AJR1yzFuwJ0LqFrcgmcX7d5	255	Valid	Never	ADI Nodal
Preferred Edition (VoiceMail Pro)	aym6GLdgt7H0dJ5FEU0rv6rdhst8iu	255	Valid	Never	ADI Nodal
Preferred Edition Additional Voicemail ...	itnmwEtFAGqJfRCy4ctweZ9MhoSDPpz	255	Valid	Never	ADI Nodal
R8+ Preferred Edition (VM Pro)	UTQ7GmyRvjL2Ab4h7eO9m3dMvd5OP5m	255	Valid	Never	ADI Nodal
Receptionist	j0ouGmgASgc5l8xYqccc13dEvx0thfJ	255	Valid	Never	ADI Nodal
SIP Trunk Channels	2TCXv5Ct5_NjER7Jzu@PldOGostMEe	255	Valid	Never	ADI Nodal
Software Upgrade 255	qyuMO@tcvjY1NoBP6Ec@LLhVdG_uOfem	1	Valid	Never	ADI Nodal
Teleworker	KAIYVQ1vUSnFoixQQuymyhOrgm5OerM	255	Valid	Never	ADI Nodal
UMS Web Services	AKVPSTBgAvvuySzEffe6oC3rOgrNKRmM	255	Valid	Never	ADI Nodal
VMPro Networked Messaging	vhCNG5yQx8NOMNmMwAcg597cN607DP@z	255	Valid	Never	ADI Nodal
VMPro TTS (Generic)	OW@iL4yYxsbO0zf_QickxN4re302QVJ	255	Valid	Never	ADI Nodal
VMPro TTS (Scansoft)	bTzwwbAwGIG9JQBeezLly_Llk@EXCnX	255	Valid	Never	ADI Nodal

5.2. Administer Recording Hunt Group

From the configuration tree in the left pane, select **Group** and an existing Hunt Group. Then select the **Voice Recording** Tab. The Voice Recording Library (VRL) will be used as the destination for all call recordings.

Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Recording Inbound:** On
- **Recording (Auto):** Voice Recording Library
- **Auto Record Calls:** External



5.3. Administer Recording User Agent

An alternate way to configure the system is by enabling recording for individual users. This can be done by selecting users instead of Hunt Groups at **Section 5.2** and performing the same steps for each user.

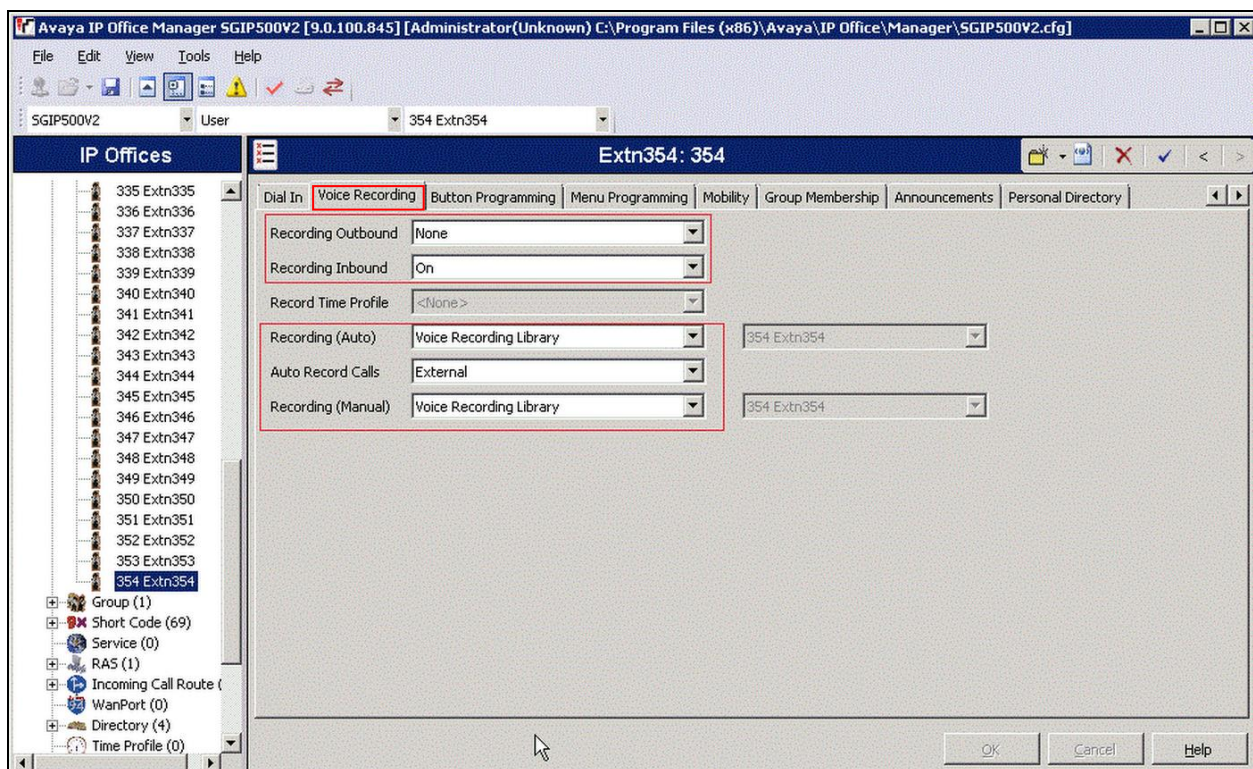
From the configuration tree in the left pane, select an existing user, and select the **Voice Recording** Tab. The Voice Recording Library (VRL) will be used as the destination for all call recordings.

Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Recording Outbound:** On*
- **Recording Inbound:** On
- **Recording (Auto):** Voice Recording Library
- **Auto Record Calls:** External & Internal**
- **Recording (Manual):** Voice Recording Library


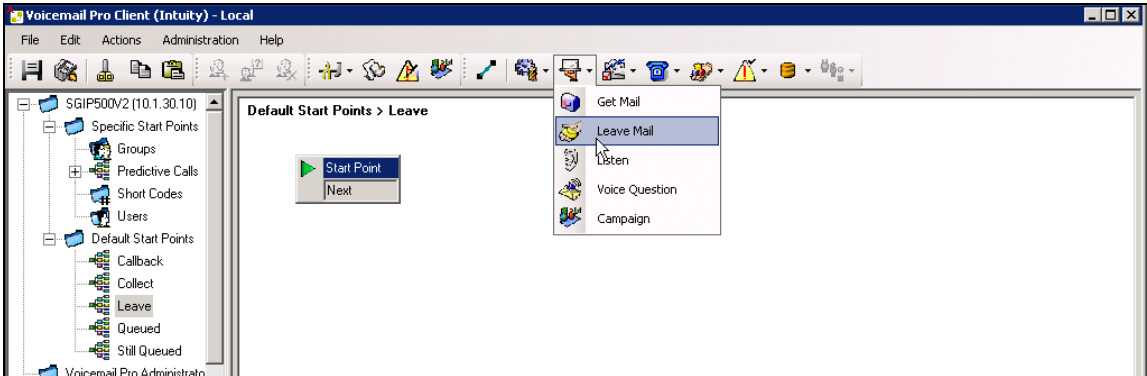
*Values depend if outbound calls need to be recorded

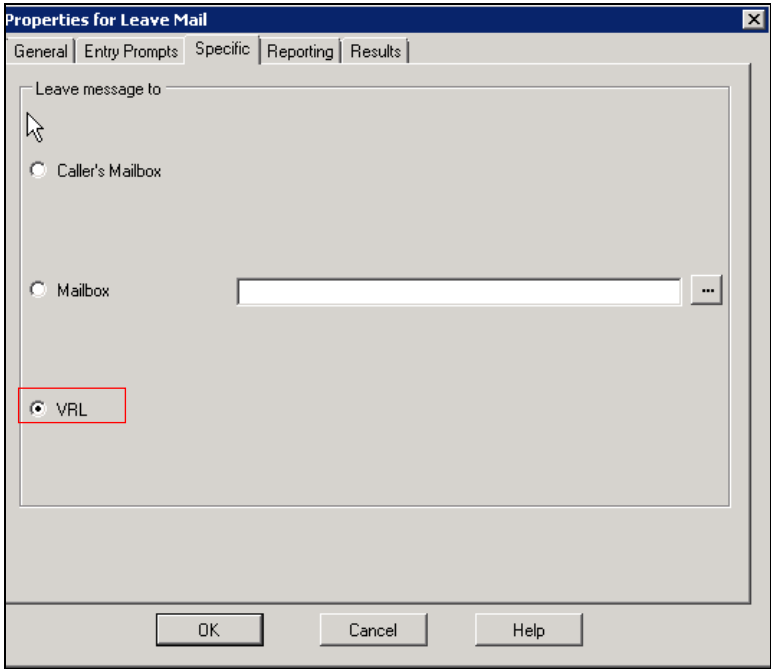

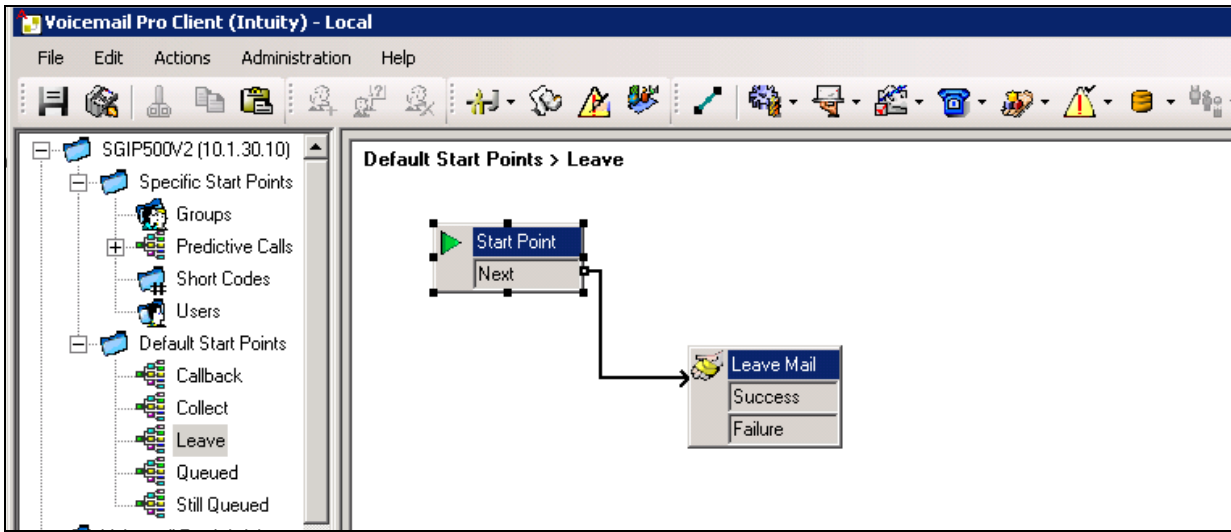
** Values depend if external and/or internal calls need to be recorded

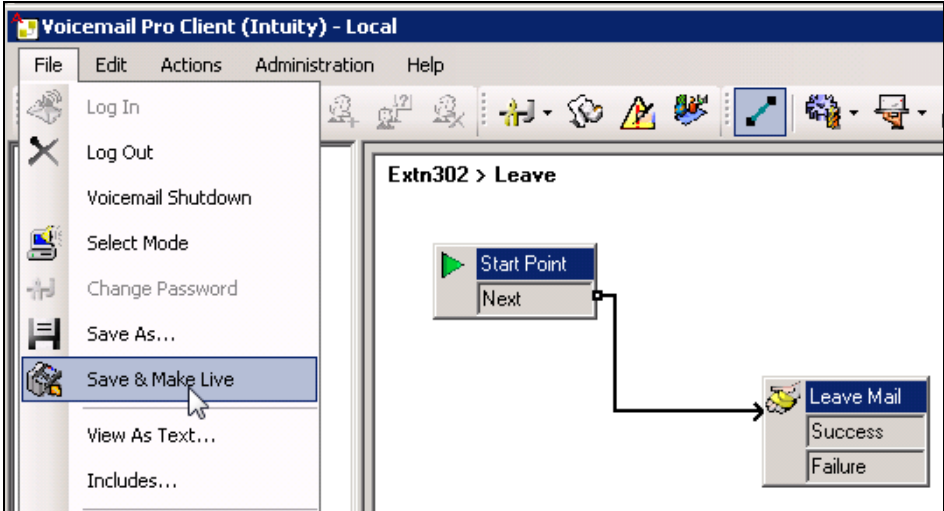


6. Configure Avaya Voicemail Pro

This section provides the procedures for configuring Voicemail Pro to store voicemail in the VRL directory. This is optional and the default configuration is done for all users for ease of configuration. Otherwise, individual users have to be configured this way.

Step	Description
1.	<p>From the server running Voicemail Pro, run the Voicemail Pro Client from Start → All Programs → IP Office → Voicemail Pro Client.</p> <p>On the left panel, select the appropriate IP Office 500 V2 machine and in this testing select SGIP500V2 (10.1.30.10) → Default Start Points → Leave. Click on the work space and</p> <p>select the Mailbox Actions  Leave Mail from the top bar as below. Place it on the work space and a Leave Mail box is created (now shown).</p> 

Step	Description
2.	<p>Right-Click on the Leave Mail box and select Properties (not shown). Select the Specific tab and check the VRL. This is to indicate voicemail is stored in the VRL. Click OK to submit the changes.</p> 
3.	<p>Link the Start Point to the Leave Mail box using the Connector  on the top bar.</p> 

Step	Description
4.	<p>Click File → Save & Make Live for the flow to be active.</p> 

7. Configure Phonestat

This section provides the procedures for configuring Phonestat. The procedures include the following areas:

- Register for Phonestat Service
- Configuring Phonestat
- Installing Phonestat Media Agent

The installation of Phonestat is typically performed by Syple support technicians. The procedural steps are presented in these Application Notes for informational purposes.


7.1. Register for Phonestat Service

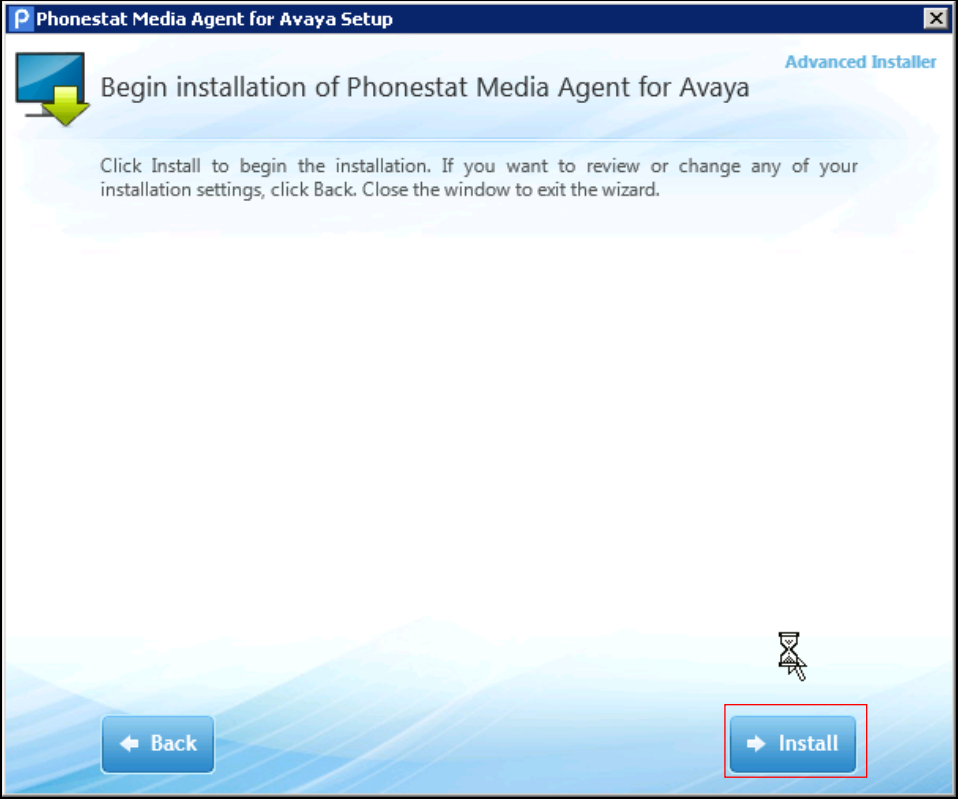
Phonestat solution can be signed up at the URL <http://www.phonestat.com/signup.html> by choosing the appropriate size of the contact center.

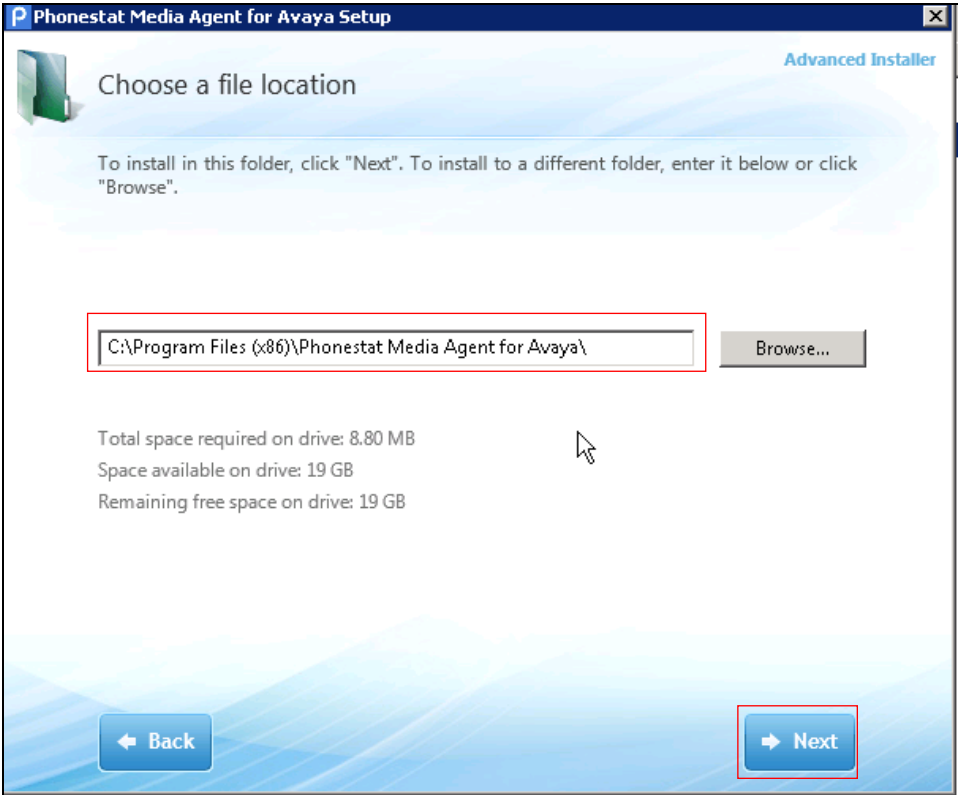
7.2. Configuring Phonestat

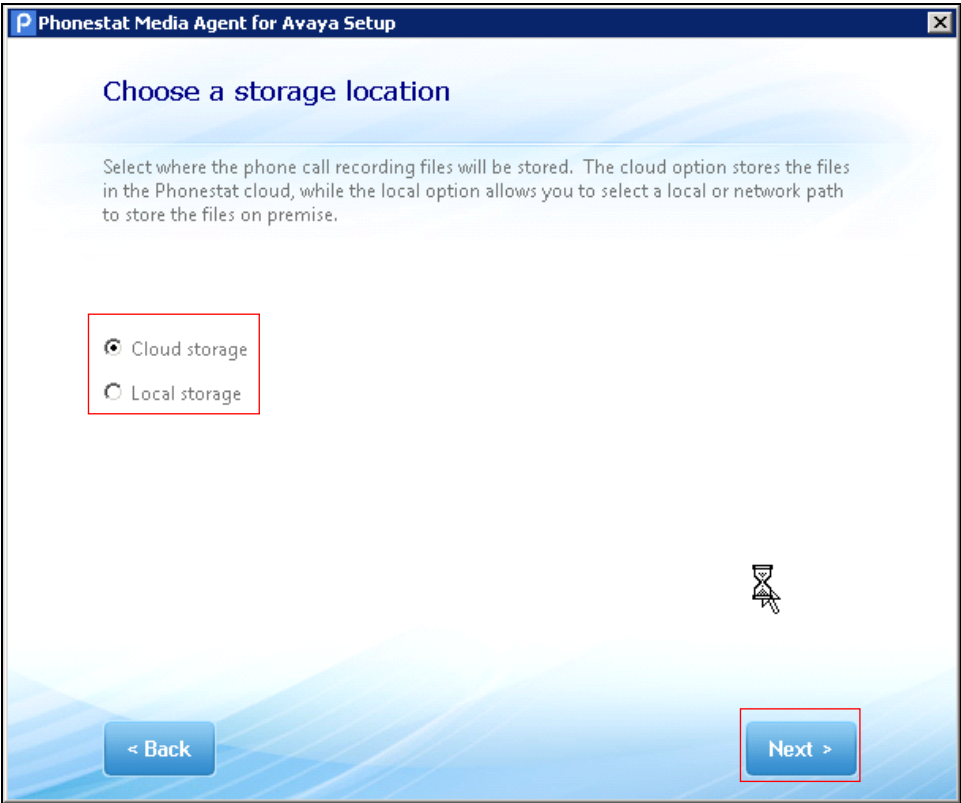
Campaign has to be created, questionnaires set before using Phonestat and users who are reviewers, agents or administrators can be created. If configured, review and daily digest emails can be received when a call is reviewed. Please consult Syple support for guidance.

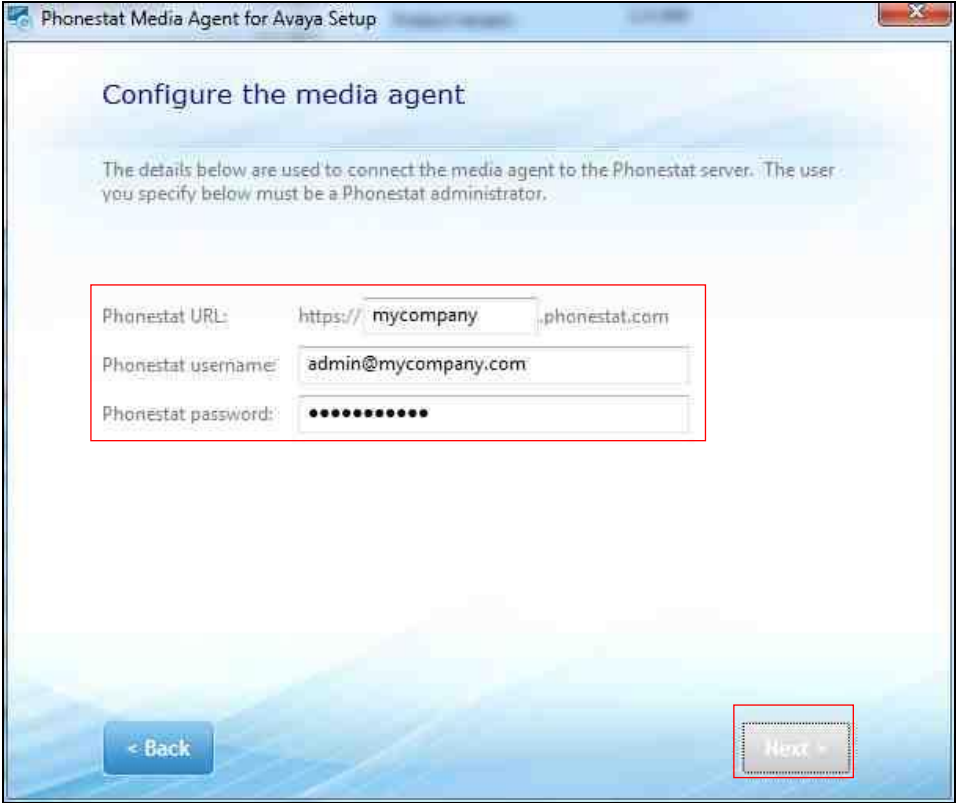
7.3. Installing Phonestat Media Agent

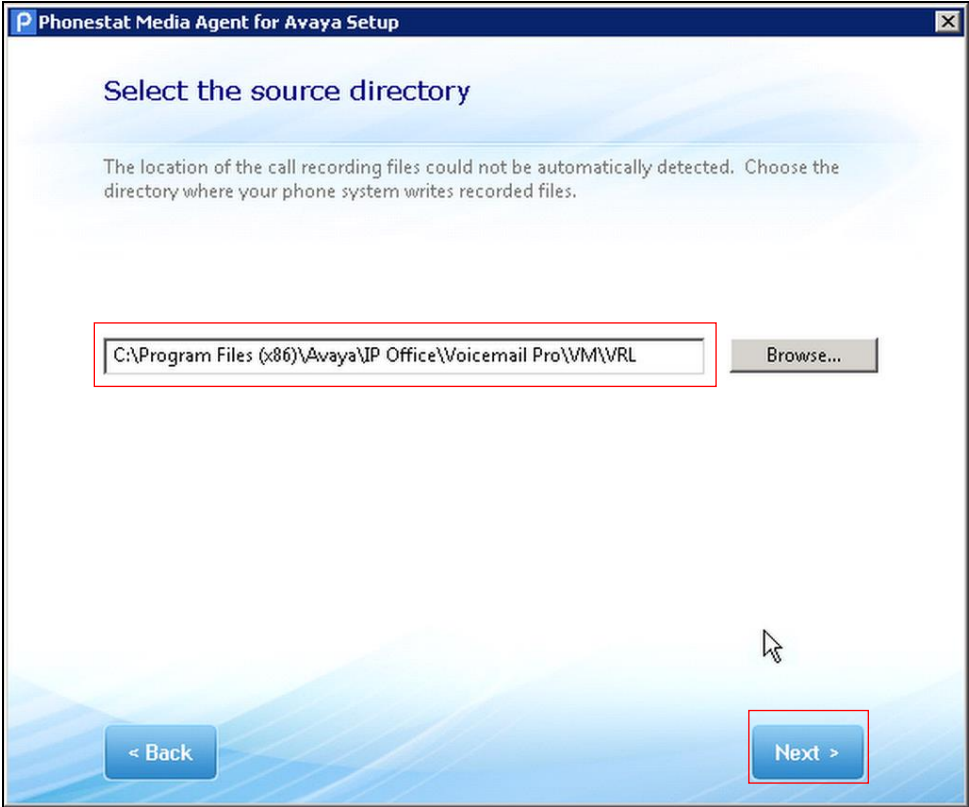
Step	Description
1.	<p>Once Voicemail Pro has been configured and calls are being stored in the VRL, the installation of the Phonestat Agent can begin. The installation package can be downloaded from the link below:</p> <p>http://www.phonestat.com/resources/PhonestatMediaAgentInstaller.exe</p> <p>Double click PhonestatMediaAgentInstaller.exe to execute the program and the wizard will start as the screen capture below. Click Next to continue.</p> 

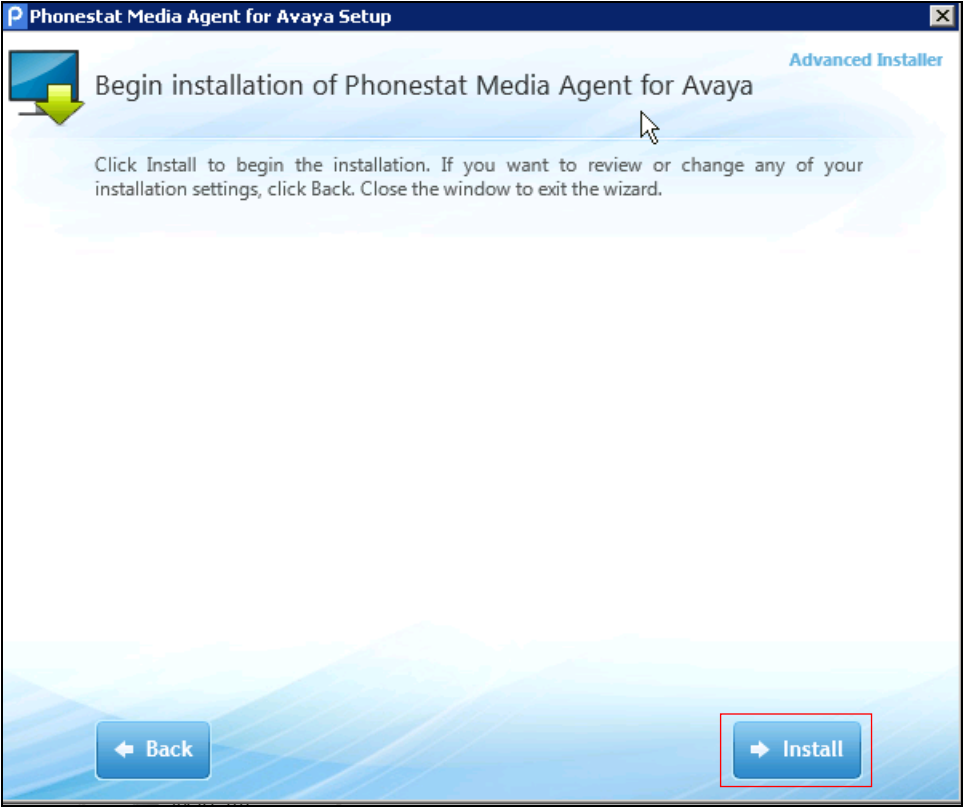
Step	Description
2.	<p>Click Install to begin the wizard.</p> 

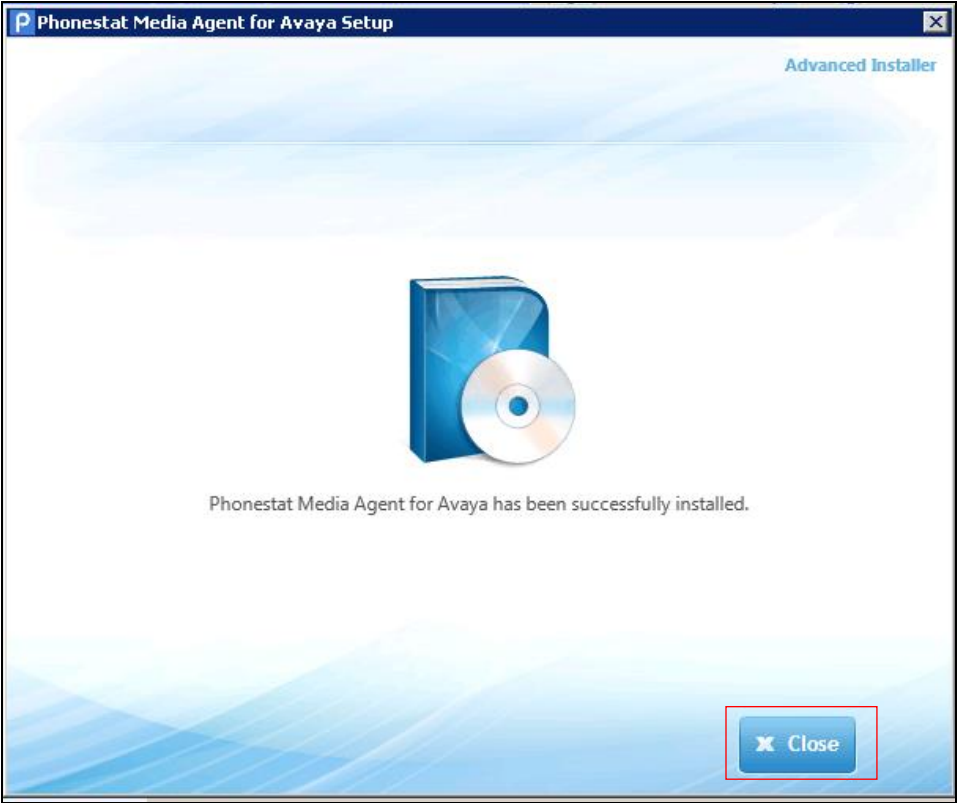
Step	Description
3.	<p>The file location “C:\Program Files (x86)\Phonestat Media Agent for Avaya\” is the default location to be installed. Click Browse if a different location is desired. Click Next to continue.</p> 

Step	Description
4.	<p>Cloud storage sends calls to the Phonestat cloud allowing them to be listened to from anywhere. Local storage allows call recordings to be stored on the media on a server in the local network so user can retain control over access to the media. For security reason, local storage might be chosen. In our testing, the default location “Cloud storage” is selected. Click Next to continue.</p> 

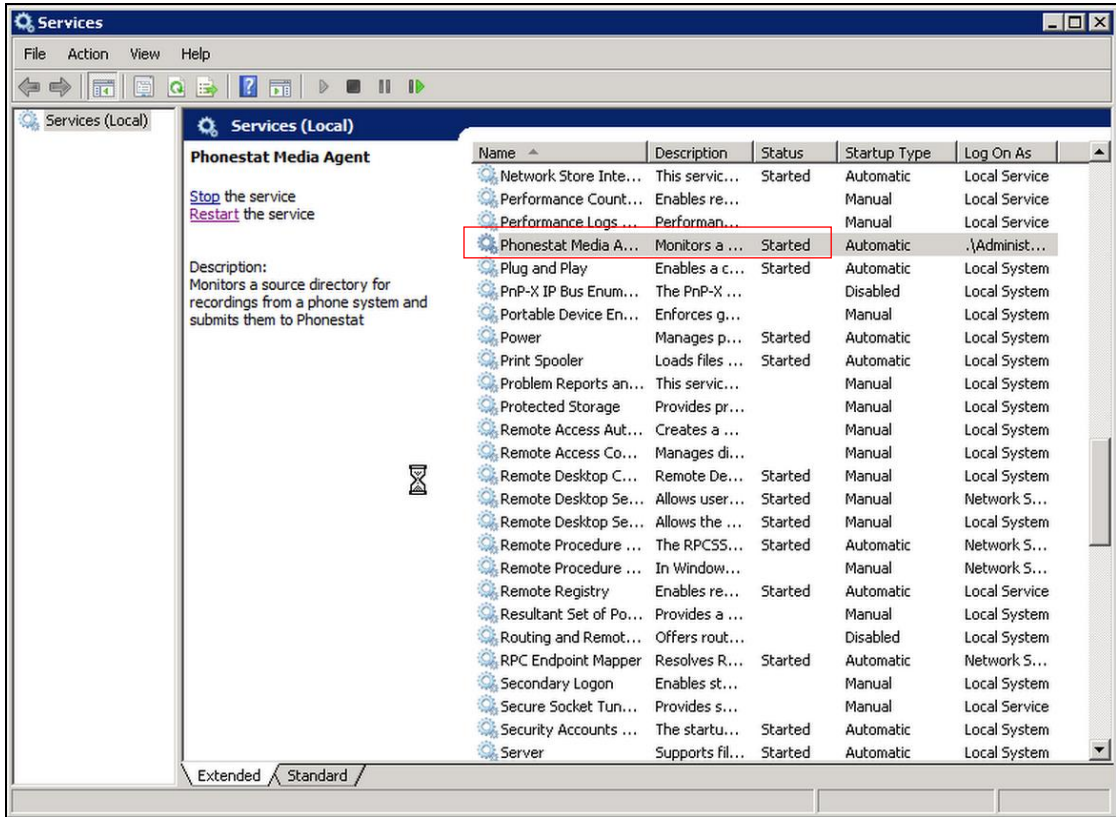
Step	Description
5.	<p>Enter the Phonestat URL for the company, email address as the username and password (set upon signup on Section 7.1). Click Next to continue.</p> 

Step	Description
6.	<p>Click Browse and navigate to the default VRL directory “C:\Program Files (x86)\Avaya\IP Office\Voicemail Pro\VM\VRL” of Voicemail Pro. Click Next to continue.</p> 

Step	Description
7.	<p>Click Install to begin installation.</p> 

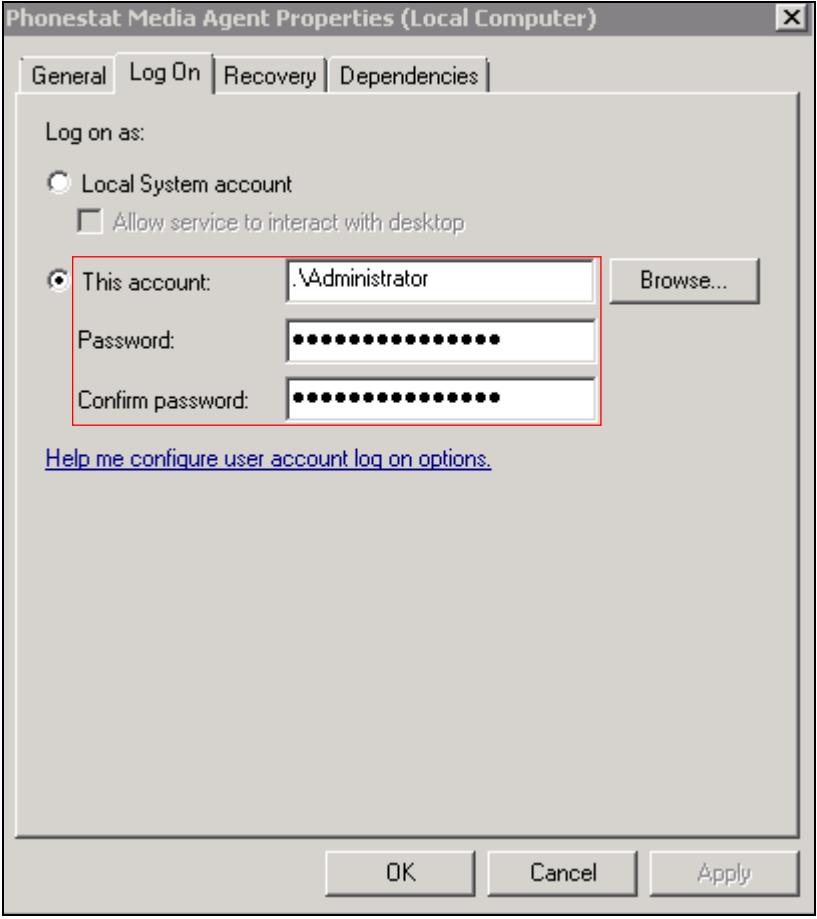
Step	Description
8.	<p>Click Close to complete the installation.</p> 

Step	Description
9.	Click Start → Administrative Tools → Services and confirm that Phonestat media Agent Status is Started in Window Services.



The screenshot shows the Windows Services console. The 'Phonestat Media Agent' service is selected. The 'Status' column for this service is highlighted with a red box, indicating it is 'Started'. The 'Startup Type' is 'Automatic' and it is running as 'Local System'.

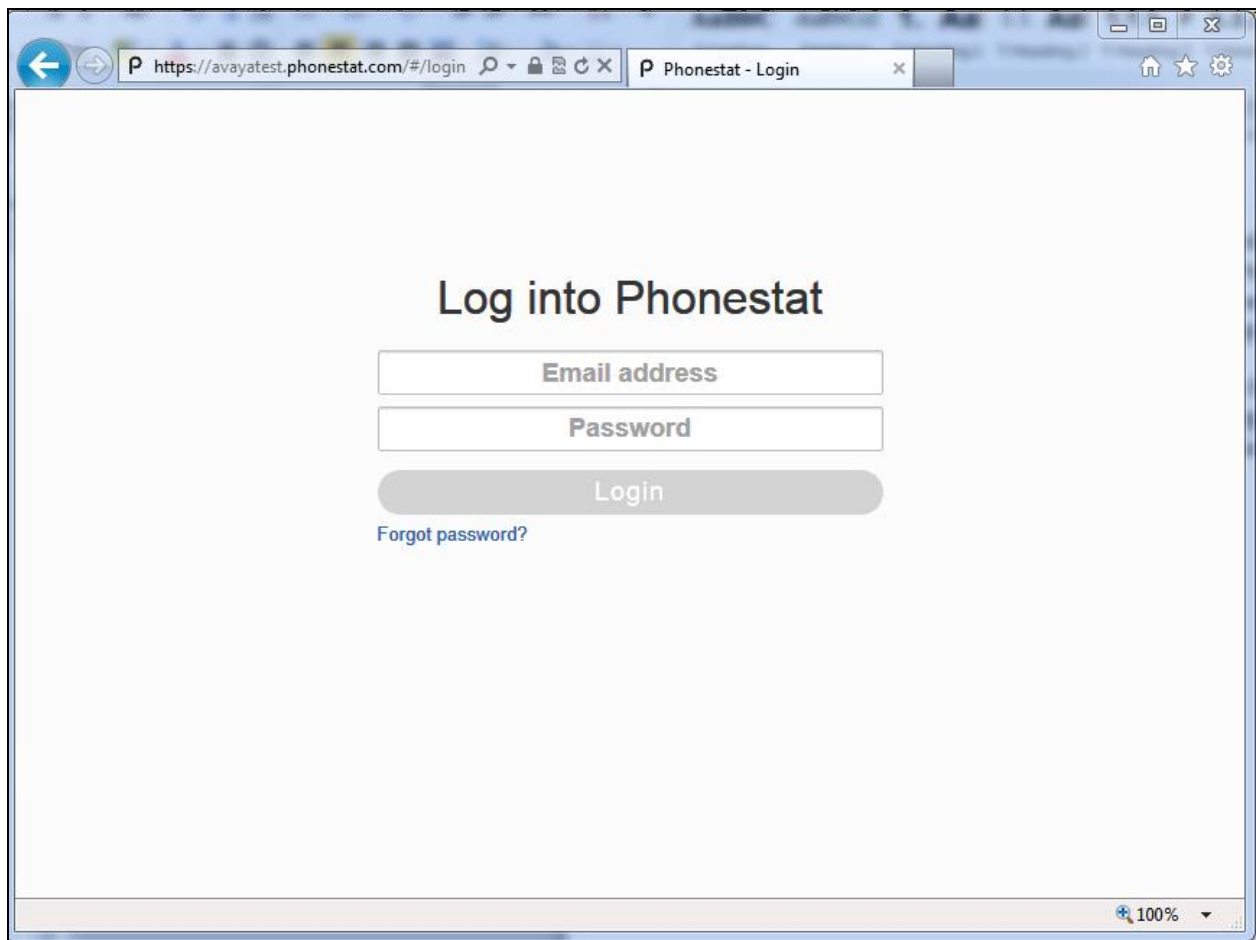
Name	Description	Status	Startup Type	Log On As
Network Store Inte...	This servic...	Started	Automatic	Local Service
Performance Count...	Enables re...	Manual	Manual	Local Service
Performance Logs ...	Performan...	Manual	Manual	Local Service
Phonestat Media A...	Monitors a ...	Started	Automatic	.\Administ...
Plug and Play	Enables a c...	Started	Automatic	Local System
PnP-X IP Bus Enum...	The PnP-X ...	Disabled	Manual	Local System
Portable Device En...	Enforces g...	Manual	Manual	Local System
Power	Manages p...	Started	Automatic	Local System
Print Spooler	Loads files ...	Started	Automatic	Local System
Problem Reports an...	This servic...	Manual	Manual	Local System
Protected Storage	Provides pr...	Manual	Manual	Local System
Remote Access Aut...	Creates a ...	Manual	Manual	Local System
Remote Access Co...	Manages di...	Manual	Manual	Local System
Remote Desktop C...	Remote De...	Started	Manual	Local System
Remote Desktop Se...	Allows user...	Started	Manual	Network S...
Remote Desktop Se...	Allows the ...	Started	Manual	Local System
Remote Procedure ...	The RPCSS...	Started	Automatic	Network S...
Remote Procedure ...	In Window...	Manual	Manual	Network S...
Remote Registry	Enables re...	Started	Automatic	Local Service
Resultant Set of Po...	Provides a ...	Manual	Manual	Local System
Routing and Remot...	Offers rout...	Disabled	Manual	Local System
RPC Endpoint Mapper	Resolves R...	Started	Automatic	Network S...
Secondary Logon	Enables st...	Manual	Manual	Local System
Secure Socket Tun...	Provides s...	Manual	Manual	Local Service
Security Accounts ...	The startu...	Started	Automatic	Local System
Server	Supports fil...	Started	Automatic	Local System

Step	Description
10.	<p>Right Click on the Phonestat Media Agent and select Properties (now shown). Click the Log On tab. Check that the Windows account for Log On is able to access the VRL directory. Otherwise, administer another account and restart the Phonestat Media Agent services in Step 9. Click OK to close this window.</p> 

8. Verification Steps

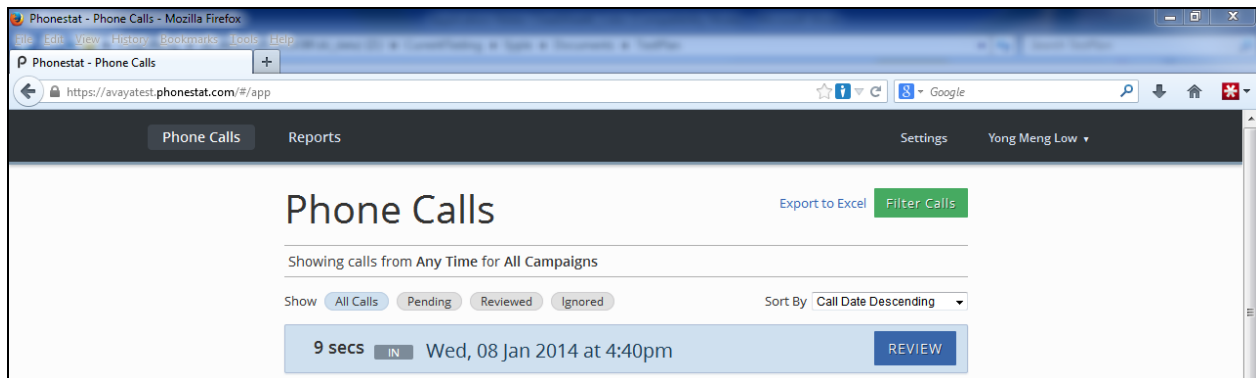
This section provides the tests to verify proper integration between IP Office and Phonestat. Prior to verification, place an incoming trunk call to a hunt group with an available agent user. Answer the call at the user, and generate unique audio content for the call prior to hanging up.

Access the phonestat web-based interface by using the URL “http://mycompany.phonestat.com” in an Internet browser window, where “mycompany” is the name of the company registered. In the following example, a test account was created. The **Log In** screen is displayed as shown below. Log in using the appropriate credentials. For first time access, user will be prompted to set password.

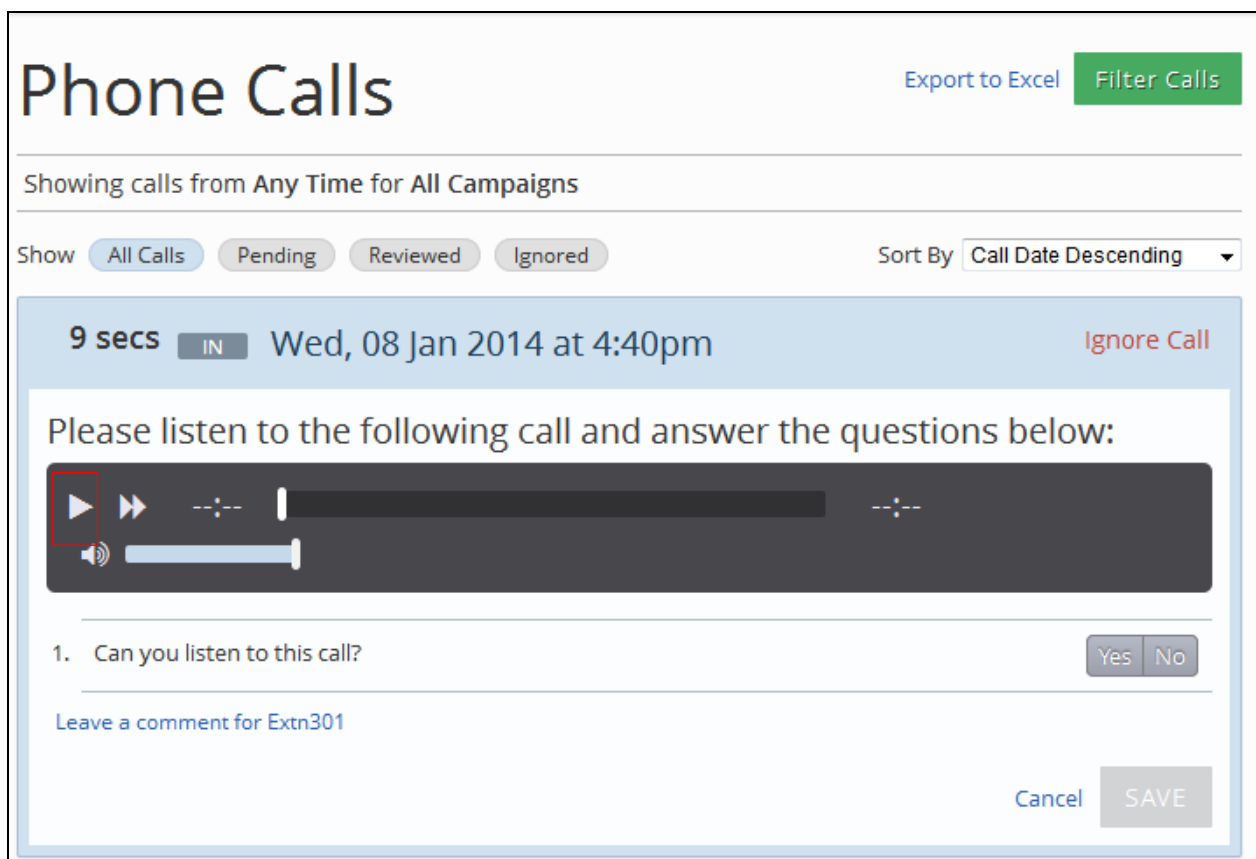


The screenshot shows a web browser window with the address bar displaying "https://avayatest.phonestat.com/#/login". The page title is "Phonestat - Login". The main content area has the heading "Log into Phonestat". Below the heading are three input fields: "Email address", "Password", and a "Login" button. A link "Forgot password?" is located below the "Login" button. The browser's status bar at the bottom shows "100%" zoom.

The screen below is displayed if the test call is successfully grabbed from the VRL directory and uploaded to the Phonestat cloud.



Click on the **REVIEW** button base on the date and time stamp and the following will show or the recordings can be ignore by clicking on the **ignore call**. Click on the **PLAYBACK** button to hear the recordings.



Select **Yes/No** if recordings can be heard or not and a space below this tab will be created to provide comments for review once this is answered. This information can be saved by clicking the **SAVE** button.

Phone Calls

[Export to Excel](#)[Filter Calls](#)

Showing calls from Any Time for All Campaigns

Show

All CallsPendingReviewedIgnored

Sort By

Call Date Descending

9 secsINWed, 08 Jan 2014 at 4:40pmIgnore Call

Please listen to the following call and answer the questions below:

00:0400:27

1. Can you listen to this call?

YesNo

Leave a comment for Extn301

CancelSAVE

9. Conclusion

These Application Notes describe the configuration steps required for Phonestat to successfully interoperate with Avaya IP Office 9.0 using Voicemail Pro. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

10. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 9.0 Knowledge Base Documentation CD*, September 2013, available at <http://support.avaya.com>.
2. *Phonestat with Avaya IP Office – Installation and Configuration Guide*

©2014 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.