Title: Integration Notes for Avaya IP Office

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Overview

DuVoice Voice Mail provides hospitality and business messaging for the Avaya IP Office, as well as unified messaging and fax capabilities.

Theory of Operation

The DuVoice Voice Mail integrates to the Avaya IP Office through analog extensions and TAPI.

Features Supported

Message Lights	Yes
Fwd to a personal greeting RNA	Yes
Fwd to a personal greeting Busy	Yes
Fwd to a personal greeting DND	Yes
Different Busy Greeting	Yes
Auto Login to a mailbox	Yes
Trunk ID Multiple Tenant	
Voice Mail Transfer Button to a mailbox	Yes
Record a call	Yes
DID fax	Yes
Caller ID with message	Yes
Trunk to trunk transfer (unsupervised)	
LS Disconnect	Yes
Tone Disconnect	
Supervised Transfers	
Call Screening	
Caller Queuing	

Hospitality Features Supported

|	
PMS Integration	Yes
Room phone restricted on checkout	Yes
Wakeup Calls	Yes

PBX Requirements and Programming

Requirements

The IP Office is required to have the following parts to integrate with the DuVoice Voice Mail:

- IP Office version 3.0(29) and above

- CTI-Pro (part #171988) provided by Avaya

- One analog extension must be connected to each of the voice mail ports. The analog extensions can be from the ports provided on the 403 and the 406 base modules or provided by an IP400 Office Phone Module (available in 8, 16 and 30-port).

- LAN connectivity to the IP Office (or routable via LAN)

- Static IP address assigned to the DuVoice system when used as the license server

- Avaya User CD (downloadable via Avaya support site)

Programming

1. The IP Office Manager Software can be loaded onto the DuVoice Voice Mail System. If this is the case, you will need to have both the Avaya Software Sentinel key as well as the DuVoice Security key connected to the PC (these keys may be parallel and/or USB).

2. Log into the IP Office Manger using the appropriate credentials. In the Manager window that appears, select File then Open to search for the IP Office system in the network. Go to the Configuration Tree and double-click System. In the System Configuration window, select the System tab and set License Server IP Address to the IP address of the machine to which the Avaya Software Sentinel key is connected.

3.   In the Manager window, go to the Configuration Tree and double-click *License* to open the list of licenses installed in the IP Office system. Right-click in the license list window and select *New*. Enter the CTI Link Pro License Key and click *OK*. In the Manager window, select *File* then *Save* and wait for the system to update. (NOTE: Before the system reloads, the new licenses will be listed with an unknown status. After the system reloads, the new licenses will list as valid.

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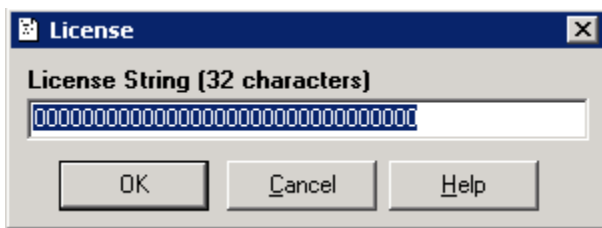
4. In the Manager window, go to the Configuration Tree and double-click *Extension* to open the list of extensions on the IP Office. Select one of the analog station ports that is connected to the DuVoice Voice Mail and double-click to open it. In the window that appears, check *IVR Port* and click *OK*. Repeat this step for each of the analog station ports that the DuVoice will be connected to.

Extension from Configuration Tree in the Manager window
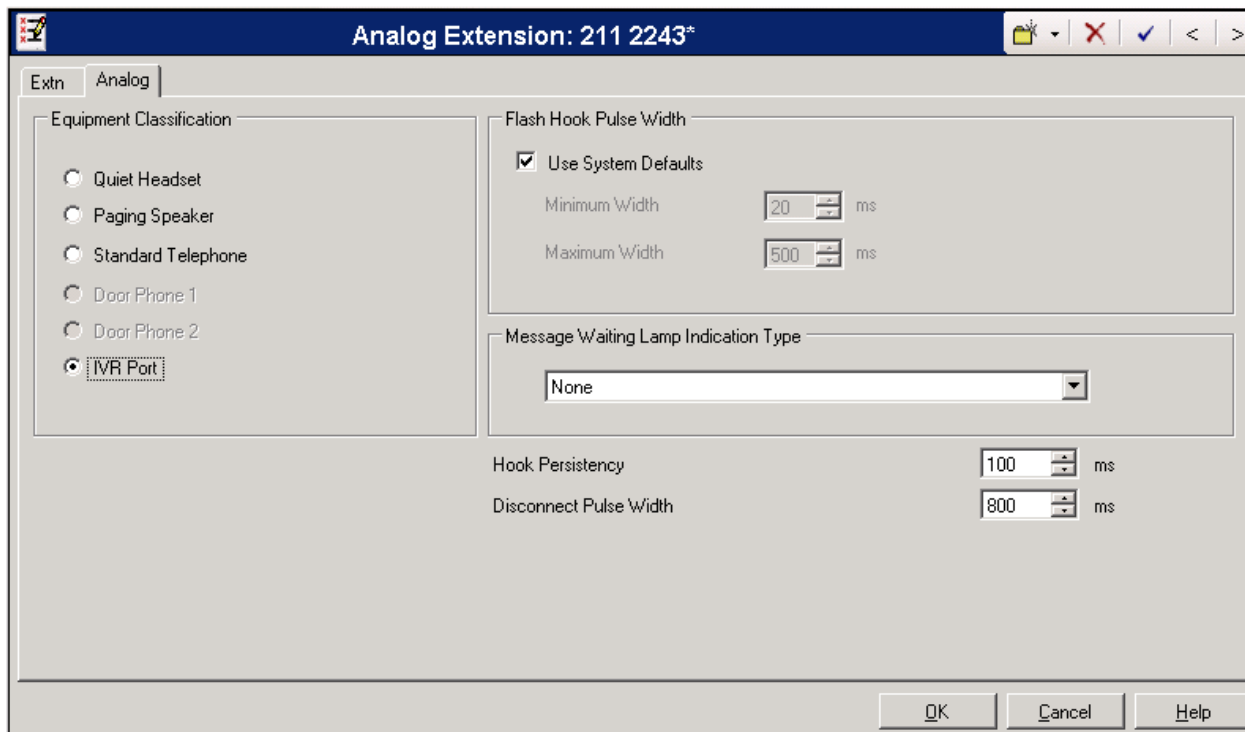
5. In the Manager window, go to the Configuration Tree and double-click *User* to open the list of extensions on the IP Office. In the User tab of the User window that appears, set Name to VM Port X where X is the port number on the DuVoice. Repeat this step for each of the analog station ports that the DuVoice will be connected to.

User from Configuration Tree in the Manager window

6. In the Telephony tab of the User window, uncheck *Call Waiting On* and check *Cannot be Intruded* and click *OK*. Repeat this step for each of the analog station ports that the DuVoice will be connected to.

Telephony tab of the User window

7. In the Manager window, go to the Configuration Tree and double-click *Hunt Group* to open the list of hunt groups on the IP Office. Open the *Main* hunt group. In the Hunt Group window that appears, add the voicemail ports to the *Extension List* pane, set *Name* to DuVoice Main, set *Extension* to the

extension number desired for the hunt group (hunt group pilot number), and the Overflow Group List should have an entry. Also, it is very important that this group does not have queuing enabled.

Hunt Group from Configuration Tree in the Manager window

Hunt Group Main: 799		🗁 ▾ ✕ ✓ < >

Hunt Group | Voicemail | Fallback | Queuing | Voice Recording

Name: Main

Extension: 799

Allocated Answer Interval (secs):

Overflow Time (secs):

Hunt Type
- ○ Group
- ● Linear
- ○ Circular
- ○ Most Idle

☐ Call Waiting On

Extension List

Extension	Name
☑ 2243	DV VM 1
☑ 2244	DV VM 2
☑ 2245	DV VM 3
☑ 2246	DV VM 4

Add... | Remove

Overflow Group List

Group Name
VM down

Add... | Remove

OK | Cancel | Help

8. In the Voicemail tab of the System Configuration window, set Voicemail Type to Group, select the hunt group made for DuVoice from the drop-down of Voicemail Destination, then click OK.

Voice Mail Tab of System Configuration
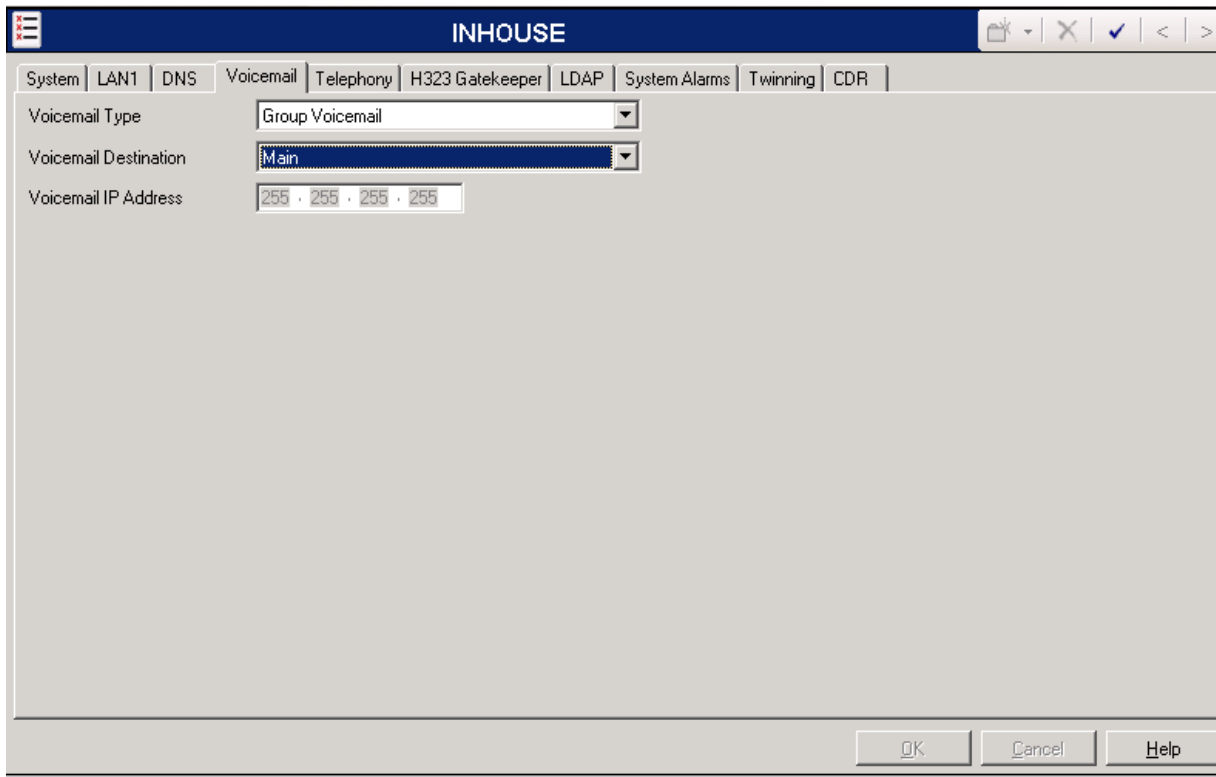
9. In the Manager window, go to the Configuration Tree and double-click *Incoming Call Route* to open the list of incoming call routes on the IP Office. Right-click in the incoming call route window and select *New*. In the Incoming Call Route window that appears, set the Line Group ID to 0 (or the desired number), set *Destination* to DuVoice AA Hunt, set *Priority* to 1, *Bearer Capability* to Any, and click *OK*.

Incoming Call Route from Configuration Tree in the Manager window

1 4258899790

Standard

Bearer Capability	Any
Line Group Id	1
Incoming Number	4258899790
Incoming Sub Address	
Incoming Caller Id	
Destination	799 Main
Locale	
Priority	1
Fallback Extension	
Night Service Profile	<None>
Night Service Destination	

OK   Cancel   Help

10. In the Manager window, go to the Configuration Tree and double-click *Line* to open the list of lines (trunks) available on the IP Office. Double-click the line (analog or digital) whose incoming calls are to be routed to the *Main* hunt group. In the window that appears, set *Incoming Group ID* to 0 (the value used for Line group ID in step 11). Click *OK*. Repeat this step for each line (trunk) assigned to the incoming call route.

Analog Trunk from Configuration Tree in the Manager window

Analog Trunk - Line 1*
Line Settings / Analog Options
Line Number	1
Telephone Number	
Incoming Group ID	1
Outgoing Group ID	0
Outgoing channels	1
Voice channels	1
Prefix	
National Prefix	0
Line Appearance ID	701

OK Cancel Help

11. In the Manager window, go to the Configuration Tree and double-click *User* to open the list of users available on the IP Office. Double-click the user entry of one of the users on the system. In the User window that appears, set *Name* to Guest and set Extension to the extension number to be assigned for this guest.

12. In the Voicemail tab of the User window, confirm that Voicemail On is checked. All other fields leave unchecked and blank.

User window from Configuration Tree in the Manager window

Twinning | T3 Options | Phone Manager Options | Hunt Group Membership |
User | Voicemail | DND | ShortCodes | Source Numbers | Telephony | Forwarding | Dial In | Voice Recording | Button Programming | Menu Programming |

Voicemail Code [   ]   ☑ Voicemail On

Confirm Voicemail Code [   ]   ☐ Voicemail Help

Voicemail Email [   ]   ☐ Voicemail Ringback

                                               ☐ Voicemail Email
                                                  Reading

┌─ Voicemail Email ──┐
│ ◉ Off   ○ Copy   ○ Forward   ○ Alert   │
└──┘

Reception / Breakout [   ]
(DTMF 0)

Breakout (DTMF 2) [   ]

Breakout (DTMF 3) [   ]

                                    [OK]   [Cancel]   [Help]

13. In the Forwarding tab of the User window, confirm that there is no forwarding active on any station (including voicemail port) that forwards the user to the voice mail port extensions or the hunt group number. Repeat this step for each DuVoice Voice Mail user.

Forwarding tab of the User window

14. In the Manager window select *File* then *Save* to push the configuration to the IP Office and wait for the unit to reboot.

Work Around

Short Codes

These special codes are used in a variety of applications, such as: record-a-call, memo recording and attendant transfer to greeting. They may be up to 10 digits in length.

Note: **These settings are only supported by the Avaya IP Office and are only used if the called party ID matches the *TAPI Hunt Group* number**.

· **RNA Prefix**—answer the call with the mailbox's RNA greeting.
· **Busy Prefix**—answer the call with the mailbox's busy greeting.
· **Immediate Record Prefix**—answer and immediately start recording the call (a.k.a., *record-a-call*).

 Short codes allow the administrator to configure features that can be accessed on a system-wide or per-user basis. Short codes can be used for:

· Speed dials
  Activating and deactivating features for an individual extension (e.g., DND) or for the whole system
· (e.g., Night Service).
· Call routing and restriction

The figure below shows a cropped snapshot of the IP Office configuration program, in which short codes have been added for each type of prefix (RNA, busy, immediate record).

Code	Telephone Number	Feature	Line Group Id
*68	800S**E	Dial Extn	0
*67N#	800S##N	Dial Extn	0
*66N#	800S#*N	Dial Extn	0

A short code may consist of anything you want; only the *Telephone Number* and *Feature* fields are critical for integration with the VMS. The *Telephone Number* should always start with the VMS hunt group number, followed by an *S*, then the prefix, and then ending with either an *N* or an *E*. The *Feature* should be set to *DialExtn*, which tells the IP Office to dial an extension.

  S—tells the IP Office to change the caller ID to what
· follows.
· **N**—is replaced with any digits that follow the short code.
· **E**—is replaced with the extension of the caller.

Given this information, consider the following three examples.

Example 1: Direct VM transfer
VM Transfer: Below is a screen shot of the IP Office short code for voice mail transfer. In the below example 799 is the voicemails hunt group, you will replace with the hunt group number that you have programmed for the duvoice ports.

Operation: Transfer + Short Code Button (or manual short code entry) + mailbox number

Short Code	
Code	*67N#
Feature	Dial Extn
Telephone Number	799S##N
Line Group Id	0
Locale	
Force Account Code	☐

Example 2: Attendant Transfer to Busy Greeting

In this case, the attendant receives a call and the user wishes to leave a message for mailbox 204.

  Press
1. *Transfer*
2. Dial *66204
3. Hang up to complete the transfer.

The IP Office will route the call to the VMS, giving the caller ID as #*204. The VMS will attempt to match the prefix (#*) and in this case will match it to the *Busy Prefix*. It will then play the busy greeting for mailbox 204 and take a message (assuming mailbox 204 is allowed to receive messages).

Example 3: Record-a-Call

In this case, the user wishes to record the conversation he or she is having:

1. Press *Conference*.
2. Dial *68.
3. Press *Conference* again to connect all parties.

Following step 2, the IP Office will dial the VMS and send the caller ID as **E (where E is the extension number of the user performing these steps). The VMS will look for a match to the prefix (**) and, in this case, it will match it to the *Immediate Record Prefix*. Consequently, it will immediately begin recording in the user's mailbox.

DID routing direct to mailbox without user in IPoffice
Overview: the DID call routes into the ICR (incoming call route) then finds no match so it defaults to the shortcodes, then there is a short code that tells the trunk calls without a match to transfer to the duvoice and pass the last 4 digits of the number dialed. The DID must pass called ID from trunk in order for this to work from the CO to the ipoffice.

So is all you need is a shortcode to look like this:

Short Code	
Code	?
Feature	Dial Extn
Telephone Number	770,5##.
Line Group Id	1
Locale	
Force Account Code	☐

The 770 in the telephone number is the duvoice hunt group.

Short Code for 911 calls:
The short code for 911 calls should be kept at the system level since it should pertain to all users. The key here is that by default the 911 short code will work fine but when the DuVoice system blocks that station, the caller can't call 911 unless the feature is set to DialEmergency. By default it just says dial.

Change the following short code for dialing 911 when a station is blocked:
Short Code: [9]11
Tell number: 911
Line group: 1 (or whatever line group is used)
Feature: DialEmergency

Voicemail Requirements and Programming

Programming

1. Install the Avaya IP Office TAPI Service Provider driver onto the DuVoice Voice Mail System. This is found on the Avaya IP Office User Applications CD. This CD must be ordered or downloaded from Avaya.

2. Put the CD in the drive and shutdown the voice mail server in Server Control. During installation your IP Office should be found on the network. If it doesn't, check your network settings. (Do not continue with the installation unless your IP Office is seen.) Take note of the IP address that it has found, you will need it during the configuration phase. No other settings are needed on this page so press *Next* and choose to finish the install.

3. When selecting components that will install, do not install defaults. TAPI is the only requirement so uncheck all items except for TAPI, then click *Next* to finish setup. Reboot the system.
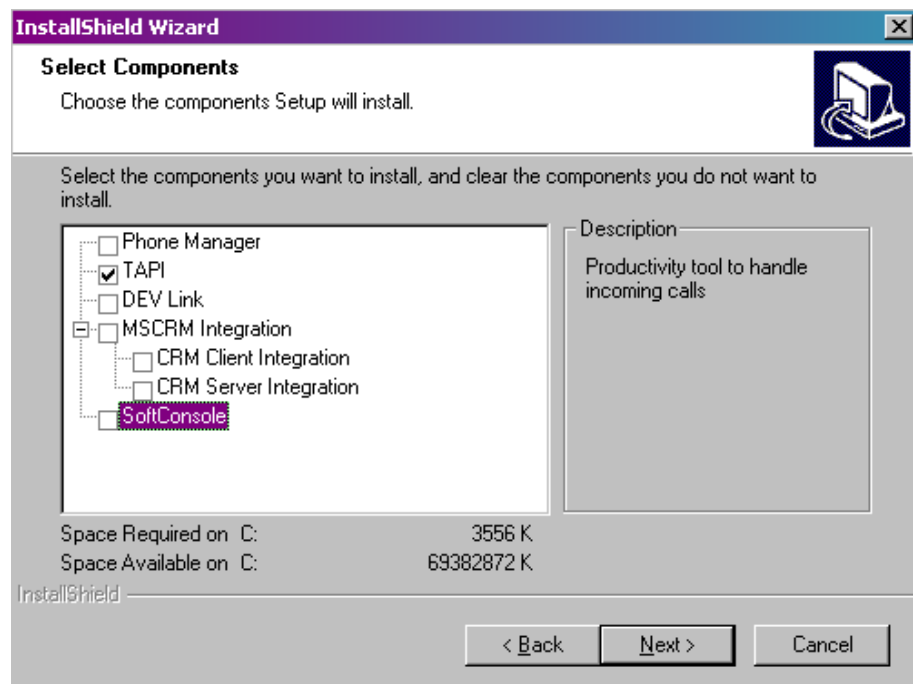
4. After the system reboots, log into the system again and open Control Panel. In the Control Panel window double-click Phone and Modem Options. Choose the Advanced tab and double-click *Avaya IP Office TAPI2 Service Provider*.

5. In the Avaya TAPI2 configuration window, set *Switch IP Address* to the IP Address of the IP Office (note from Step 2). Select *Third Party*, set *Switch Password* to the password used to administer your IP Office, and check *WAV Users* and *ACD Queues*.
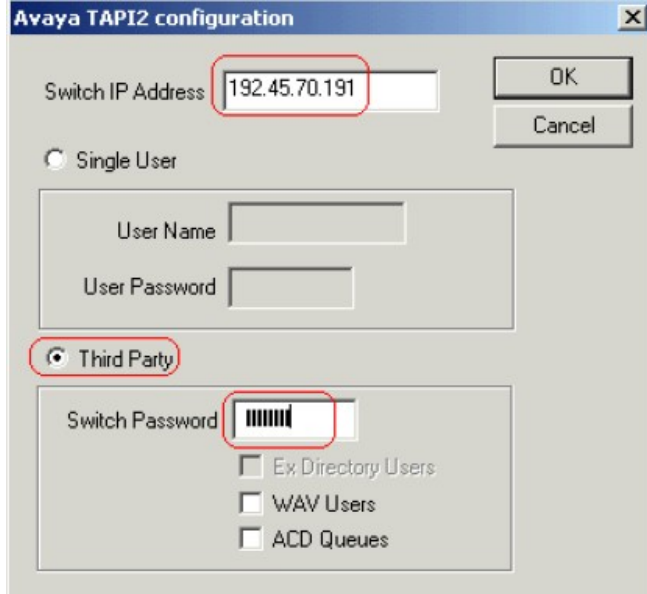
6. Each time you change any TAPI configurations you MUST reboot the system. Do this now; when the system is rebooted, log back in, then shutdown the voice mail server to continue the configuration.

7. Verify connectivity with the IP Office by clicking *Start*, *Programs, Accessories*, *Communications*, then choosing *Phone Dialer*. In the Phone Dialer window that appears, select *Edit* then *Options*. Click on the Lines tab, select *Phone Calls* and view the drop-down list. If one or more *IP Office Phone: XXX* (where XXX is an extension number) entries appear, then the IP Office TAPI Driver is installed and working properly.

8. Verify the voice mail server is stopped by opening Server Control in the DuVoice folder. System status should read "The system is not running". If it is, click *Shutdown* to stop the voice mail server.

9. Open System Configuration in the DuVoice folder. By default Voice Ports will be listed. If the PBX Template assigned to these ports is something other than Avaya IP Office then they must be changed. Do this by right-clicking each of the existing voice ports and choose to delete. To add ports with the correct PBX Template, click on *Define Ports* and choose to *Define a Range of Voice Ports.* Follow the port-creation wizard, choosing the *Avaya IP Office* integration template. Finish port creation setup.

10. In System Configuration, select *Integrations* then click *TAPI Integration* from the pull-down menu. From the window that appears, select the TAPI Provider to be *Avaya IP Office* and you must enter the *TAPI Hunt Group* (hunt group number assigned to the voice mail port extensions).
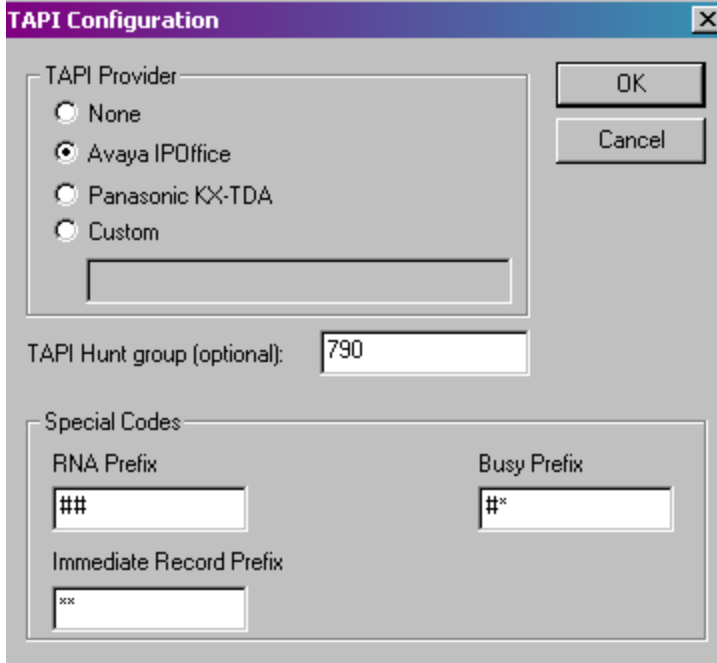
11. Voice Ports listed in System Configuration must be labeled with the extension numbers from the IP Office that are connected to it. If this is not done the integration will not function. To do this, double-click Voice Port Number 1. In the box "This port's extension" type in the extension number from the PBX that is physically connected to this port, then click Apply to save. Repeat this for each of the voice ports.

12. Close the System Configuration window, open Server Control window and click *Startup* to start the DuVoice voice mail service.

*On the Product Training section of the website you will find a flash training module called *IP Office TAPI Install.* This tutorial will demonstrate how to install and configure the IP Office TAPI integration.

Troubleshooting and Testing

TAPILine

The TAPILine utility is a troubleshooting tool. It connects to the telephone system the same way voice mail does, but allows you to visually monitor all the integration data sent from the switch. TAPILine does not need to be running for the system to integrate, and it can remain running even if the voice mail system is shutdown.

1. To open the utility, click on Start, Programs, DuVoice, Support, then click on TAPILine.

2. You must first connect to the TAPI Switch. This is done from the menu by clicking on File, or by right-clicking on a blank line. Select *Open Avaya IP Office* to connect to the switch. If TAPILine cannot connect to the switch check your TAPI Service Provider configuration.

3. Once connected to the switch right-click a blank line and choose to *open a device.* This will bring up a dialog box allowing you to select the extensions or devices you wish to monitor. (The Avaya TAPI service provider will not show phones which are hidden from the directory.)

4. Once the selected extensions have been opened, they will be shown in the grid with several columns. When calls are made you will be able to monitor the state, call type, origin, etc. of the selected extensions.

5. By right-clicking on an extension you will see a list of commands available. *Close* will close the line and it will no longer be monitored.   *Set MWI* and *Clear MWI* can be used to turn the

message waiting indicator on or off. *Block* disables the phone from making outbound calls and *Un-Block* enables it.

*On the Product Training section of the website you will find a flash training module called *TAPILine.* This tutorial will demonstrate how to use TAPILine to help debug a TAPI installation.

Conclusion

Refer to our support website http://support.duvoice.com for further information, such as manuals, integration notes, technical bulletins, FAQ's, flash training and much more.

If you need further assistance please contact DuVoice Technical Support Monday - Friday 8am - 5pm Pacific Time, (425)250-2393.