IP Office 8.0

Implementing Voicemail Pro on Linux

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What is new in 8.0

1. What is new in 8.0

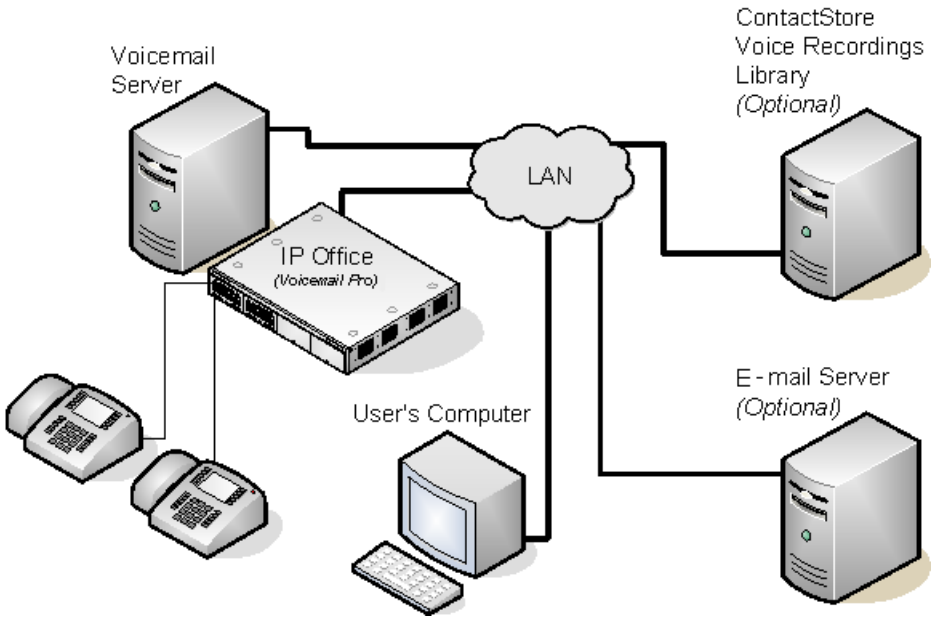
The following functionality has been added to Voicemail Pro 8.0.

- **International Time Zone support**
  The International Time Zone (ITZ) support is now available on the central Voicemail Pro server and the distributed Voicemail Pro servers that are connected to the IP Offices located in different time zones across the globe.
  Note: When you upgrade Voicemail Pro to a newer version, the Voicemail Pro server updates the current time zone offset of the user. However, it does not update the campaign information.
- **Exchange Integration support on Linux**
  Exchange Integration is now available for Voicemail Pro on Linux. To set up Exchange Integration for Voicemail Pro on Linux, the Administrator needs to install a new MAPI proxy service that provides the communication layer between Voicemail Pro on Linux and the Exchange server. The Administrator must install the MAPI proxy service on a Windows computer that can communicate with the Exchange server. The Windows computer can be an Exchange server computer using the Messaging API (MAPI) that is shipped with the Exchange server. If the MAPI proxy service is installed on any other Windows computer, then the Administrator can use Microsoft Outlook to communicate to the Exchange server.
  Note:
  1. Starting with Exchange Server 2007, the MAPI is not shipped with the Exchange server but can be installed separately. For details, see http://support.microsoft.com/kb/945835.
  2. Microsoft does not support installing Exchange Server components and Microsoft Outlook on the same computer. For details, see http://support.microsoft.com/kb/266418.
- **Unified Communications Module**
  A Linux-based Voicemail Pro server is pre-installed on Unified Communications Module and is operational with the default Preferred Edition license. Some of the behaviors of a Voicemail Pro server installed on Unified Communications Module are different from a standard Linux-based Voicemail Pro server. See UC Module Voicemail Pro 16 for details.
- **Conference Call Center Support Removal**
  Voicemail Pro no longer supports Conferencing Center telephony action and, therefore, the Conferencing Center will no longer be available as an action. If a user imports or opens a call flow containing the Conferencing Center actions, the system displays a warning message that the call flow contains an unsupported action. If the user does not take any action on the call flow that contains a Conferencing Center action, Voicemail Pro will disconnect the call reaching this action. Restoring a call flow containing the Conferencing Center action will log the name of the unsupported action and the call flow name where it was found. The log file can be found at <Installation path>\VMPro_Restore.log.

Chapter 2.
Voicemail Pro

2. Voicemail Pro

The diagram illustrates a Voicemail Pro system with some of the setup options.



- **IP Office Control Unit**
  The IP Office Voicemail Pro licenses 12 are entered into the configuration of the IP Office system. The licenses are required to activate Voicemail Pro features. You can run an unlicensed Voicemail Pro service for demonstration and testing for a duration of two hours only. License keys are issued against and validated against the unique serial number of the feature key dongle used by the IP Office.
- **Voicemail Pro Server**
  The Voicemail Pro service is installed on a server computer. This becomes the computer where messages and other data are stored for the mailboxes and services provided by Voicemail Pro. The server can be a Windows or Linux based server.
  - **Multiple Servers**
    There are a number of scenarios where multiple Voicemail Pro servers can be supported. For example, to provide a backup voicemail server or to support multiple IP Office systems in a network. See Centralized Voicemail Pro 80.
- **Voicemail Pro Client**
  The Voicemail Pro Client is used to administer the Voicemail Pro service. The client is a Windows application that you can install on another computer to allow remote administration of the server. Only one client can connect to the server at any time.
  - The version of a Voicemail Pro client used with a Voicemail Pro server should match. If the Voicemail Pro client is used to load a call flow from an earlier version of Voicemail Pro server, you will be warned that if you edit the call flow you will not be able to save it back to the original server. If the client is used to load a call flow from a later version of Voicemail Pro server it will stop the action and prompt that the call flow cannot be loaded.
- **Telephone Extension**
  For internal extensions, the voicemail server provides message waiting indication. This is done automatically for the telephone user's own mailbox. However, the user can also be configured to receive message waiting indication for other mailboxes.
- **User's Computer**
  In addition to accessing mailbox voicemail messages through the telephone, there is a range of methods for accessing messages from a user's computer. This can be by web browser, IMAP e-mail account, Exchange server e-mail account, and various other options. The IP Office one-X Portal for IP Office and IP Office Phone Manager applications can also be used.
- **E-mail Server**
  Using an e-mail server, Voicemail Pro can provide a number of services. This includes the ability to send message alerts or message copies. For Exchange e-mail servers, with the forward to e-mail option, the Exchange server can be used as the message store with users accessing their messages using Exchange clients such as Microsoft Outlook, Outlook Web Access, and so on.

2.1 Supported Languages

By default, the prompts installed match the installer language selection plus English. If other languages are required, they need to be selected by doing a custom installation. The installable Voicemail Pro prompts are listed in the table below. The availability of a language in voicemail does not necessarily indicate support for IP Office in a country that uses that language.

Language	WAV Folder	Fallback Selection	TTS Linux
Brazilian Portuguese	ptb	> pt > en.	✓
Chinese (Cantonese)	zzh	> en > enu.	✗
Chinese (Mandarin)	ch	> en > enu.	✓
Danish	da	> en.	✓
Dutch	nl	> en.	✓
English UK	en	> en.	✓
English US	enu	> en.	✓
Finnish	fi	> en.	✓
French	fr	> frc > en.	✓
French Canadian	frc	> fr > enu > en.	✓
German	de	> en.	✓
Greek	el	> en.	✓
Hungarian	hu	> en.	✗
Italian	it	> en.	✓
Korean	ko	> en.	✗
Latin Spanish	eso	> es > enu > en.	✓
Norwegian	no	> en.	✓
Polish	pl	> en.	✓
Portuguese	pt	> ptb > en.	✓
Russian	ru	> en.	✓
Spanish	es	> eso > en.	✓
Swedish	sv	> en.	✓

Note: If you are using Voicemail Pro installed on Unified Communications Module, see Languages Supported on UC Module Voicemail Pro 16.

When the IP Office routes a call to the voicemail server, it indicates the locale for which matching prompts should be provided, if available. Within the IP Office configuration, a locale is always set for the system. However, differing locales can be set for each user, incoming call route, and short codes in addition to the default system locale.

The locale sent to the voicemail server by the IP Office is determined as follows:

Locale Source	Usage
Short Code Locale	The short code locale, if set, is used if the call is routed to voicemail using the short code.
System Locale	If no user or incoming call route locale is set, system locale is used, unless overridden by a short code locale.
Incoming Call Route Locale	The incoming call route locale, if set, is used if the caller is external.
User Locale	The user locale, if set, is used if the caller is internal.

If the prompts matching the IP Office locale are not available, the voicemail server will provide prompts from a fallback language, if available. The above table of languages lists the order of fallback selection.

If required, the language provided by a voicemail call flow can be changed using a **Select System Prompt Language** action.

TTY Teletype Prompts

TTY (Teletype (Textphone)) is included in the list of installable languages. TTY is a text-based system that is used to provide services to users with impaired hearing.

2.2 Voicemail Pro Licenses

The **Help** | **About** screen in the voicemail client can be used to check which IP Office the voicemail server is working and the licenses it has received from that IP Office.

The license keys are entered into the IP Office configuration using the IP Office Manager. If the Voicemail Pro server is installed without licenses, it will run for 2 hours and then shut down.

For IP Office Release 6 and higher, support for Voicemail Pro is enabled by the addition of a **Preferred Edition** license.

- **Preferred Edition (Voicemail Pro) :**
  This license enables support for Voicemail Pro as the IP Office's voicemail server with four voicemail ports. The voicemail server with the Preferred Edition license provides the services listed below. Additional licenses can be added for additional voicemail features, these are detailed separately. The Preferred Edition license was previously called **Voicemail Pro (4 ports)**.
  - Mailboxes for all users and hunt groups.
  - Announcements for users and hunt groups.
  - Customizable call flows.
  - Call recording to mailboxes.
  - Campaigns.
  - TTS e-mail reading for users licensed for **Mobile User** or **Power User** profiles.
  - Use of **Conference Meet Me** functions on IP500 and IP500 V2 systems.
- **Advanced Edition**
  The Advanced Edition license enables the additional features listed below. A **Preferred Edition** license is a pre-requisite for the **Advanced Edition** license.
  - Support for Customer Call Reporter.
  - Voicemail Pro database interaction (IVR).
  - Voicemail Pro Visual Basic Scripting.
  - Voicemail Pro call recording to ContactStore.[1]

  1. In a Small Community Network using centralized voicemail, this license only enables ContactStore support for the central IP Office. Remote IP Offices in the network require their own Advanced Edition license or a VMPro Recordings Administrator license.
- **Preferred Edition Additional Voicemail Ports**
  The required license for Voicemail Pro server support (Preferred Edition (Voicemail Pro)) also enables four voicemail ports. This license can be used to add additional voicemail ports up to the maximum capacity of the IP Office system (IP406 V2 = 20, IP412 = 30, IP500 = 40, IP500 V2 = 40). This license was previously called **Additional Voicemail Pro (ports).**
  Note: If you are using Voicemail Pro installed on Unified Communications Module, see Number of Simultaneous Users on UC Module Voicemail Pro 16 for the maximum capacity of the IP Office system.
- **VMPro Recordings Administrators :**
  To support ContactStore in a Small Community Network, IP Offices other than the central IP Office require either their own Advanced Edition license or this license.
- **VMPro Networked Messaging :**
  Enables the VPNM (Voicemail Pro Networked Messaging) functionality within Voicemail Pro. Enabling VPNM is required for message exchange with remote Voicemail Pro systems and Avaya Interchange systems.
- **VMPro TTS Professional :**
  Enables use of all text to speech facilities provided by Voicemail Pro. One license per simultaneous instance of TTS usage.

Note: If you plan to use Voicemail Pro installed on Unified Communications Module for centralized voicemail, also see Storage Space for Call Recordings on UC Module Voicemail Pro 16.

Legacy Licenses

The following legacy licenses are still supported by IP Office Release 6 and higher.

- **UMS Web Services**
  This legacy license is used to enable UMS voicemail services support for users set to the ***Basic User*** profile. Other users are enabled for UMS through their licensed user profile.
- **VMPro Database Interface :**
  This legacy license enables 3rd party database support within Voicemail Pro call flows. For IP Office Release 6 and higher, this is also enabled by the **Advanced Edition** license.
- **VMPro VB Script :**
  This legacy license enables Visual Basic Script support with Voicemail Pro. For IP Office Release 6 and higher, this is also enabled by the **Advanced Edition** license.

2.3 Number of Simultaneous Users

All connections between the voicemail server and the IP Office are through LAN using data channels. The maximum number of data channels that can be used for voicemail operation at any moment are shown below.

IP Office	Maximum for Voicemail Pro
IP500	40
IP500 V2	40

The actual number of simultaneous users is determined by the licenses for Voicemail Pro 12 added to the IP Office configuration. Note that some specific functions can have voicemail channels reserved 63 for their use or can have channel restrictions.

Note: If you are using Voicemail Pro installed on Unified Communications Module, see Number of Simultaneous Users on UC Module Voicemail Pro 16.

Chapter 3. Installation

3. Installation

Linux Server Installation

A Voicemail Pro server is one of the Linux components installable as part of the IP Office Application Server DVD installation. That process is covered separately in the IP Office Application Server documentation.

- The license requirements 12 on the IP Office system for supported voicemail features are the same.
- Configuration of the IP Office configuration 54 settings for voicemail is not affected by whether the server is Windows or Linux based.
- Configuration of the voicemail server setting is still done using the Windows based Voicemail Pro client application. The client can be downloaded from the Linux server for installation on a Windows client computer.

Mixing Linux and Windows Servers

In scenarios where multiple Voicemail Pro servers are used, see Centralized Voicemail Pro, a mix of Linux and Windows based servers can be used.

Linux Server Feature Support

For a Voicemail Pro 8.0 server running on a Linux based server, the following Voicemail Pro features are currently **not supported**:

- VB Scripting.
- 3rd Party Database Integration.
- VPNM.
- VRLA.

When logged into the voicemail server using the Voicemail Pro client, the features that are not supported are grayed out or hidden. If those features are present in an imported call flow, they will not function and calls that attempt to use those features will be disconnected.

For Small Community Network scenarios where multiple voicemail servers are present, for example distributed and backup server, a mix of Linux based and Windows based servers are supported.

UC Module Voicemail Pro

A Linux-based Voicemail Pro server is pre-installed on Unified Communications Module and is operational with the default **Preferred Edition** license. However, the following behaviors of a Voicemail Pro server installed on Unified Communications Module are different from a standard Linux-based Voicemail Pro server.

- **Supported Languages**
  Only the English US and English UK languages are supported for Text to Speech (TTS).
- **Accessing Voicemail Pro Server**
  To access the Voicemail Pro server running on Unified Communications Module, use the IP address or the DNS name of the IP Office control unit that hosts Unified Communications Module.
- **Backup and Restore Settings**
  Backup files can be saved on a USB storage. The available file paths for the USB storage are */media/sdb1* and */media/sdc1*. As the storage space available on UC Module SSD is limited and primarily required for saving call recordings, use a USB storage for the backups.
- **Voicemail Pro Logging Level**
  The default logging level is set to **Critical**.
- **Number of Simultaneous Users**
  The maximum number of data channels that can be simultaneously used for voicemail operation is 40. However, if one-X is also enabled on Unified Communications Module, the maximum number of data channels that can be used simultaneously may reduce to 20.
- **Storage Space for Call Recordings**
  Voicemail call recordings use an approximate storage space of 1 Mb for each minute of recording. Therefore, the available storage space on UC Module SSD is limited to an estimated maximum of 400 hours of call recordings. Consider this fact if you plan to use the Voicemail Pro server installed on Unified Communications Module for centralized voicemail.
- **Voicemail IP Address**
  IP Office hosting Unified Communications Module connects to the Voicemail Pro server installed on the card by default. The IP address of the Voicemail Pro server is automatically detected and cannot be modified.

3.1 General Installation Requirements

Here is a list of general requirements for all types of voicemail installation.

- A client computer with IP Office Manager and Microsoft .NET Framework versions 2.0 installed on it. If .NET 2.0 is not detected, you will be prompted to install it before the Voicemail Pro installation proceeds.
- An IP Office Feature Key. Refer to *Avaya IP Office Standard Version Installation* (15-601042) for details.
- Licenses based on the serial number of the IP Office Feature Key. These should include:

  - A license for Voicemail Pro and any additional voicemail ports is required. If Voicemail Pro Server is installed without a license it will run for two hours and then shut down.
  - Licenses for any other Voicemail Pro components being installed, see Voicemail Pro Licenses 12.
- **IP Office Applications DVD.**

Tips

- Before you begin to install Voicemail Pro, check that the computer that you are using can connect to the IP Office unit and that you can load and save a configuration file using IP Office Manager.
- Switch off any computer and hard disk sleep, power down, suspend, hibernation modes.

3.1.1 Computer Specifications

The Voicemail Pro application requires various licenses entered into the IP Office configuration to control the features it offers and the number of simultaneous connections[13], up to 40 on IP Office 5.0+ IP500 control units. The operation of Voicemail Pro can be customized to provide special services.

The Voicemail Pro software can be installed as separate Voicemail Pro client and server parts. You can perform remote administration of the Voicemail Pro server from a computer with just the Voicemail Pro client installed. A copy of the client is automatically installed locally with the Voicemail Pro server.

Source	
DVD	IP Office 8.0 Application DVD (Disk 1)
Languages	See Supported Languages[11].
IP500	✓ IP Office Standard Edition[1], ✓ IP Office Professional Edition.
License	✓ See below.

1. For pre-IP Office 5.0 IP500 systems, an IP500 Upgrade Standard to Professional licenses is required to support Voicemail Pro.

The Voicemail Pro server part of the software consists of Text to Speech (TTS) in addition to the core server software. Through adding additional licenses, Voicemail Pro can use the TTS functions to speak text and numbers to callers in addition to recording prompts. This is intended mainly for scenarios where Voicemail Pro is obtaining text and number values from a customer database.

Notes:

1. Do not use the **Large Fonts** setting, as it may cause options on some screens to become inaccessible.
2. For a good connection speed, use a 100 Mbps network card.
3. Free disk space requirements[21] are also subject to the message storage required.

For information on computer specification and other requirements, see IP Office Application Server documentation

Ports

The Voicemail Pro service uses the following ports.

Port Number	Type	Description
25	TCP	Used to listen for SMTP connections.
37	UDP	Used to receive time requests (RFC 868).
143	TCP	Used to service IMAP4 requests.
50791	UDP	Used to receive requests from IP Office PBX.
	TCP	Used to receive requests from one-X Portal for IP Office.
50791	TCP	Used to receive connections from Voicemail Pro client.

Note that Voicemail may use additional ports for connection to services such as 3rd party database or Microsoft Exchange.

3.1.2 Virtual Server Support

Operation of IP Office server applications, including Voicemail Pro, is supported using the following virtual servers.

- **VMWare Server.**
- **Microsoft Virtual Server 2005 R2.**
- **Microsoft Server Hyper-V.**

3.1.3 Network Requirements

For information on network requirements for installation on Linux, see IP Office Application Server documentation.

3.1.4 Disk Space Requirements

The following are only approximations:

- At least 5GB of free disk space is required on the operating system drive , regardless of to which drive Voicemail Pro is actually installed.
- A compact Voicemail Pro installation requires 300MB or more.
- A typical installation requires approximately 255MB.
- A custom installation requires up to 5GB (for all supported languages) of disk space. However, prompts and recorded messages consume an additional 1MB of disk space per minute.
- For a busy environment you can expect to require at least 1000 minutes of message recording space, that is 1GB.

3.2 Server/Client Installation

You can install only the client using the Voicemail Pro installation software for Linux.

Component	Sub Component	Client
Voicemail Pro	Voicemail Pro Client	✓
	Voicemail Pro Service	✗
	Languages	✓
Voicemail Pro Campaign Web Component		✗
Web Voicemail (UMS)		✗

Before you begin:

1. Log on to the server computer using the account under which you intend the Voicemail Pro server or service to run. This account must have full administrator rights to the server computer. If you prefer, create a new user account called Voicemail and configure it such that it has full administrator rights on the computer and the account password does not expire.
2. In IP Office Manager, check that the correct licenses for Voicemail Pro 12 have been installed and show a status of ***Valid***.
3. For installations other than client only and compact, check that the required pre-installation processes have been completed.

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To install the Voicemail Pro software components:

For more information on installing the Voicemail Pro software components on Linux, see IP Office Application Server documentation.

- **Voicemail E-mail Installation** 23
- **Installing Text to Speech Features** 39

3.2.1 Modifying the Installed Components

Deletion of installed components is not supported on Linux.

3.2.2 The Voicemail Pro Services

The IP Office application services installed on the IP Office Application Server can be started and stopped individually. This is required for maintenance or if a particular service is not currently needed, for example, if one-X Portal for IP Office has been installed but is not currently licensed.

The services can be set to automatically start after a server reboot. By default, all the IP Office services are automatically started.

Starting a Service

1. Log in to the IP Office Application Server Web configuration pages.

2. Select **Home** (this is selected by default after logging in). The services and their current status (running or stopped) are listed.

3. To start a particular service click on the **Start** button next to the service. To start all the services that are not currently running, click on the **Start All** button.

For more information on starting and stopping Application Services see, IP Office Application Server documentation.

3.3 Voicemail Email

Voicemail E-mail features of the voicemail server provide a number of e-mail functions:

- **Forward a Message to E-mail**
  If the voicemail server is set to IP Office mailbox mode, mailbox users are able to manually forward an voicemail message to their e-mail.
- **Automatic New Voicemail Messages**
  For all mailbox modes, users can use voicemail e-mail to automatically have a message sent to their e-mail whenever they receive a new voicemail message. The e-mail can be a simple alert or it can include a copy of the voicemail as an attachment.
- **eMail Action**
  With customized call flows, an **eMail** action can be used to send a caller's recorded voicemail message to a specified e-mail address.
- **UMS Exchange**
  In conjunction with Exchange server and Microsoft Outlook, users are able to use their Outlook inbox as their mailbox for voicemail messages. If the Exchange server is 2007/2010 and the mailbox is configured for Unified Messaging, the users will also have the ability to play the message within Outlook, if using Microsoft Outlook 2007/2010.

Voicemail E-mail features requires the voicemail server to be configured for access to either an SMTP e-mail server or to a MAPI e-mail server via a MAPI enabled e-mail client program on the voicemail server computer.

- **SMTP Installation** 24
  This is an e-mail standard supported by most e-mail servers. It is the default e-mail mode for the voicemail server.
- **MAPI Installation** 28
  MAPI requires a MAPI compliant e-mail client program to be installed on the Voicemail Pro server. It also requires the Voicemail Pro service to be run using a user account that is able to send e-mails via that MAPI client.
  - The exact method of integration between the voicemail server and the MAPI e-mail client depends on whether the voicemail server is part of a work group or a domain. This guide contains examples for both approaches.

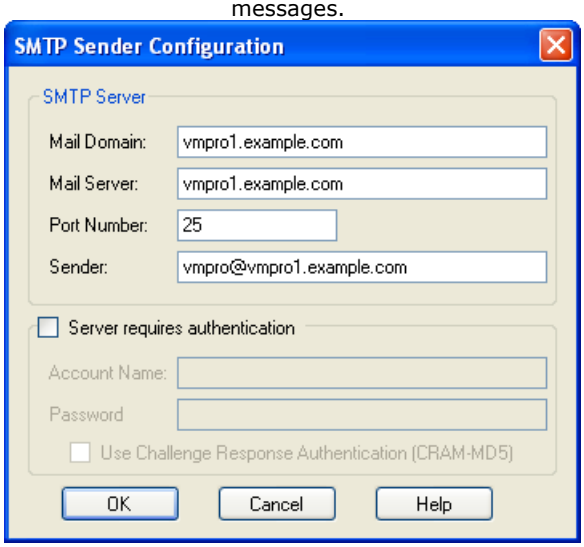
3.3.1 SMTP Setup

To configure the server SMTP e-mail settings:

1. Start the Voicemail Pro Client.
2. Click **Preferences** and select **General**.
3. Click the **Email** tab.
4. Verify that there are no settings on the **MAPI** sub tab.
5. Enter the SMTP settings on the **SMTP Sender** 70 sub tab. These are the settings that the voicemail server uses for sending SMTP e-mails.

- **Logging**
  If selected, SMTP logging 96 by the server is enabled.

- **Servers**
  This section is used to enter details of the SMTP server or servers to which the voicemail server send its messages.



To add a server, click on the . icon. To edit the server, click on the icon. To delete a server entry, click on .

- **Mail Domain**
  This field is used differently depending on whether it is the first entry in the list or not:
  - **For the first server entry in the list:**
    This is the default outgoing e-mail settings. It also sets the mail destination domain on which the voicemail server filters incoming messages (see below) and so is repeated on the **SMTP Receiver** 74 tab.
    - **Messaging Between Voicemail Servers**
      For messaging between voicemail servers, the first entry in the SMTP Sender list must be the one configured and used. Each server uses the SMTP server service on the same server computer as the voicemail service. For example a Windows based servers uses the SMTP e-mail provided by the IIS on the same server. The voicemail service also uses the domain set to filter incoming SMTP mails received by the SMTP server. For this to work, the domain entered should be the fully qualified name of the server on which the voicemail server is running, for example ***vmpro1.example.com***. Any incoming messages where the recipient mail domain is not exactly the same as the specified domain are ignored. The recipient can either by ***vmsyncmaster***, ***vmsyncslave*** or the name or extension of a mailbox on the Voicemail Pro server, for example ***Extn201@vmprocentral.example.com*** or ***201@vmprocentral.example.com***.
  - **For subsequent entries:**
    The domain specifies that these settings should be used for e-mails sent to the matching domain. The entry must be a fully qualified name resolvable by DNS or an IP address.
- **Server**
  This specifies the IP address or fully qualified domain name of the SMTP server to which messages are sent.
- **For the first server entry in the list:**
  Where messaging between voicemail servers is being used (central, backup and or distributed servers), the first entry is used and will match the domain set above.
- **For subsequent entries:**
  It will be the address of the e-mail server that will handle e-mails for recipients other than another voicemail server on the network.
- **Port Number**
  This is port to which messages are sent, usually 25.
- **Sender** (**Identifier**)
  Note that some servers will only accept e-mails from a specific sender or sender domain. If left blank, the voicemail server will insert a sender using either the e-mail address set for the voice mailbox user if set or otherwise using the best matching name it can resolve from the IP Office.
- **Server Requires Authentication**
  This check box indicates whether the connection to send SMTP messages to the mail server requires authentication with that server. The authentication will typically be to the name and password of a mailbox account configured on that server.
  - **Account Name**
    Sets the name to use for authentication.
  - **Password**
    Set the password to use for authentication.
  - **User Challenge Response Authentication (Cram MD5)**
    If this check box is selected, the name and password are sent using Cram MD5.

6. Click **OK**.
7. Click **Save and Make Live**.

3.3.2 MAPI Setup

3.3.2.1 Domain Member

Before you start to install the Voicemail Pro software, you **must**:

1. Create a Voicemail Domain Account 26.
2. Configure Outlook for Internet Mail 32.

You are then ready to install Voicemail Pro for MAPI Voicemail E-mail as a Domain Member. This involves the following key stages:

1. Install the Voicemail Pro Software 33.
2. Install the MAPI Service 28.
3. Switch Voicemail Pro to MAPI 29.

3.3.2.1.1 Creating a Voicemail Domain Account

1. Make sure that the computer that is running the Voicemail MAPI service is a member of the domain. To join the domain you will need access to a log account with administrative permissions on the domain as well as the server computer, consult the domain administrator.
2. On the Exchange server:
   - Create an account called **Voicemail** on the domain and an associated mailbox.
   - Provide a secure password.
   - Check the **User Cannot Change Password** and **Password Never Expires** boxes.
3. Log on to the voicemail server computer using a domain administrator account.
4. Click **Start** | **Administrative Tools** | **Computer Management**.
5. In the left pane, expand **Local Users and Groups**, and click **Groups**.
6. Double-click **Administrators**, and click **Add**.
7. Click **Locations** and select the domain name in the list.
8. In the **Enter the object names to select** field, type *Voicemail* and click **Check Names**.
9. Select **Voicemail** in the list and click **OK** followed by **OK**.

3.3.2.1.2 Configuring Outlook for VoiceMail Email

To configure Outlook on your system, perform the following steps:

1. On the desktop, right-click the Outlook icon and select **Properties**.
2. On the **General** tab, select **Add**.
   a. Select **Microsoft Exchange Server**.
   b. Click **Next**.
   c. In the **Server** field, enter the name of the Exchange server.
   d. In the **Mailbox** field, enter ***Voicemail***.
   e. Click **Next**.
   f. When you are asked if you travel with this computer, select ***No***.
   g. Click **Next**.
   h. Click **Finish**.
3. Highlight the **MS Exchange Settings** and click **Properties**.
   a. Highlight **Microsoft Exchange Server** and click **Properties**.
   b. Click **Check name**.
   c. If the name is resolved, select **Apply**.
   d. Click **OK**, **OK**, and **Close** to shut the mail settings.
4. Do not continue until the name has been resolved correctly with the Exchange server. If the name is not resolved, check the account details with the Exchange Administrator.
5. Open **Outlook** and select **Yes** to register Outlook as the default e-mail application.
   a. Select **Tools > Options**.
   b. Click the **Preferences** tab.
   c. Click **E-mail Options**.
   d. Uncheck **Save copies of messages in Sent Items folder**.
   - You might want this option selected during initial setup to aid troubleshooting. However due to the size of wav file message attachments you should uncheck it after installation testing is completed.
6. Log on to the computer running the Voicemail MAPI service using the voicemail account.
7. From Outlook, send a message direct to an extension user.
8. If this message is received correctly, you can continue installing the Voicemail Pro software. See Installing the Voicemail Pro Software 33.

3.3.2.1.3 Installing the MAPI Service

You must install MAPI service on a Windows server to allow Voicemail Pro installed on Linux to communicate to MS Exchange servers.

Note: You must install MAPI on the same user's account on which you have installed Windows. Also note that if you are running Exchange Server 2003, you must not install the MAPI Service on the same computer that runs the Exchange server.

1. Insert the IP Office Applications DVD. Click on the link for Voicemail Pro MAPI and then double-click on setup.exe.

The system displays the **Choose Setup Language** menu. This language is used for the installation process and does not affect the language prompts that are installed on the system.

2. Select the language for the installation process.

3. Click **OK**.

The system displays the **Preparing Installation** menu.

- If the **Modify, repair or remove the program** window is displayed, follow the upgrade process.

The system displays the **Welcome** window.

4. Click **Next**.

The system displays the **License Agreement** dialog box.

5. Accept the terms and conditions and click **Next**.

The system displays the **Customer Information** menu.

- Use the default names or enter a user and company name.

  Note: These settings do not affect the Voicemail Pro MAPI installation.
- Select the option **Anyone who uses this computer (all users)**.
- Enter the company name.
- Click **Next**.

The system displays the **Choose Destination Location** menu.

6. Unless specifically required, for ease of maintenance, use the proposed folder location. Click **Next**.

7. The system displays the **Service Account Name** menu.

- Enter the user name and password of the account to use. Alternatively, click **Browse** and select a name from the list of available computer or network accounts.
- Enter the port number that Voicemail Pro MAPI service will use.
- Click **Next**. The system validates the account name, password, and the port number.

  If the validation fails, the system prompts you to create a new account that matches the details entered. If the port entered is already being used, the installer prompts you for entering a different port number. The system displays **50792** as the default port number.

The system displays the **Outlook Client Details** dialog box.

8. Enter a valid outlook profile and click **Next**.

The system displays the **Ready to Install** dialog box.

9. Click **Install**.

The system prompts you to start the Voicemail Pro MAPI service.

10. Click **Yes** to start the service immediately or click **No** to start the service later.

The system displays the **Final Installation** dialog box.

11. Click **Finish**.

12. Switch Voicemail Pro to MAPI 29.

3.3.2.1.4 Adding Port to Windows Firewall

Voicemail Pro installed on Linux uses MAPI service as a proxy to the Microsoft Exchange server. Voicemail Pro will send commands to the MAPI service, which in turn will send the corresponding MAPI commands to the Exchange server. The responses from the Exchange server will be relayed back to the Voicemail Pro server via the MAPI service.

For the client servers to communicate with the Voicemail Pro server, add the port that the MAPI service uses to the Windows Firewall.

1. Open the Windows **Control Panel**.
2. Open **System and Security** | **Windows Firewall**.
3. Click **Advanced settings**.
4. Click **Inbound Rules** in the left pane.
5. Click **New Rule** in the right pane.
   The **New Inbound Rule Wizard** opens up.
6. Select **Port** and click **Next**.
7. Select **TCP** and enter the port number that the MAPI service uses in the **Specific local ports** field.
8. Click **Next**.
9. Select **Allow the connection** and click **Next**.
10. Check the **Domain**, **Private**, and **Public** check boxes.
11. Click **Next**.
12. Enter a name for the rule and click **Finish**.
13. Click **Outbound Rules** in the left pane and repeat step 5 29 to step 12 29.

3.3.2.1.5 Switching VoiceMail Pro to MAPI

By default, the Voicemail Pro server is configured for SMTP e-mail mode. However, if MAPI settings are entered it will switch to MAPI mode. Some options are not available if you are working offline. You must be working online to use this feature.

To select the server e-mail mode

1. Start the Voicemail Pro Client.
2. Click  **Preferences** and select **General**.
3. Click the **Email** tab.
4. Select the **MAPI Service** tab.
   a. In the **Address** field, type the IP address of the Windows based computer where the MAPI service is installed.
   b. In the **Port** field, type the default **50792** TCP Port of the Windows based computer where the MAPI service is installed.
5. In the **MAPI** tab.
   a. Select Enable MAPI.
   b. Choose the MAPI e-mail account listed in **Profile**.
6. Click **OK**.
7. Click  **Save and Make Live**.

3.3.2.2 Work Group Member

Before you start to install the Voicemail Pro software, you must:

1. Create a Voicemail User Account 30.
2. Configure Outlook Express for Internet Mail 31.
3. Configure Outlook for Voicemail E-mail 27.
4. Configure Outlook for Exchange Server 33.

The user name and password created are requested as part of the installation of the Voicemail Pro service. The Microsoft Outlook software must be installed on your computer before you can configure it.

You are then ready to install the Voicemail Pro software. See Installing the Voicemail Pro Software 33.

By default, Voicemail Pro is set to use SMTP for e-mails. Set Voicemail Pro to use MAPI. See Switching Voicemail Pro to MAPI 29.

You also need to set the SMTP E-mail Account settings on the Voicemail Pro so that they match those of the customer's e-mail server. See Changing SMTP E-mail Account Settings 35.

3.3.2.2.1 Installing VoiceMail Pro for MAPI VoiceMail Email as a Work Group Member

Before you start to install the Voicemail Pro software, you must:

1. Create a voicemail user account. See Creating a Voicemail User Account 30.
2. Configure Outlook Express for Internet Mail. See Configuring Outlook Express for Internet Mail 31.
3. Configure Outlook for Internet mail. See Configuring Outlook for Voicemail E-mail 27.
4. Configure Outlook for Exchange server. See Configuring Outlook for Exchange Server 33.

The user name and password created are requested as part of the installation of the Voicemail Pro service. The Microsoft Outlook software must be installed on your computer before you can configure it.

You are then ready to install the Voicemail Pro software. See Installing the Voicemail Pro Software 33.

By default, Voicemail Pro is set to use SMTP for e-mails. Set Voicemail Pro to use MAPI. See , Switching Voicemail Pro to MAPI 29.

You also need to set the SMTP E-mail Account settings on the Voicemail Pro so that they match those of the customer's e-mail server. See Changing SMTP E-mail Account Settings 35.

3.3.2.2.2 Creating a Voicemail User Account

To create a Voicemail User Account

For this example the name of the created user account is **Voicemail**.

1. Log on to the server computer using an administrator account.
2. Open the Windows **Control Panel**.
3. Click **User Accounts** | **Add or remove user accounts**.
4. Click **Create a new account**.
5. Enter *Voicemail* as the new account name and select **Administrator** as the account type.
6. Click **Create Account**.
   The new account **Voicemail** is created and added to the list of user accounts.
7. Click **Voicemail** and create a secure password for the account.
8. Continue with one of the following as appropriate to the installed MAPI client and method for sending e-mail.

3.3.2.2.3 Configuring Outlook Express for Internet Mail

To configure Outlook Express for Internet Mail

1. Click the **Outlook Express** icon to start the Configuration wizard.
2. In the **Display name box** enter ***Voicemail***.
3. Click **Next**.
4. Select **I already have an e-mail address that I'd like to use** and enter the address in E-mail address, eg. voicemail@example.com. Click **Next**.
5. Enter the name or address of the Incoming mail server and the Outgoing mail server.
   Note: If you enter the name, configure the IP address of the DNS Server in the voicemail computer.
6. Click **Next**.
7. Enter the e-mail account name and password, for example Voicemail. Select **Remember password**.
8. Click **Next**.
9. Click **Finish** to complete the wizard.
10. Open Outlook Express and select **Tools** > **Options**.
11. Click the **General** tab.
    - Uncheck **Send and Receive messages at Start up**.
    - Uncheck **Check for new messages every**.
12. Select the **Send** tab.
    - Uncheck **Save copy of sent messages in the 'Sent Items' folder**.
    - Check **Send messages immediately**.
    - Under **Mail Sending Format** select **Plain Text**.
13. Click **OK**.
14. Log on to the server computer using the account that will be used for the Voicemail Pro server.
15. From Outlook or Outlook Express, send a message direct to an extension user.
16. If this message is received correctly, continue with installing the Voicemail Pro software.

For the installation of Outlook to work correctly, the following setup process must be followed. Outlook can be configured in two ways. Using the Wizard, prior to completing the steps below will cause Outlook not to send the messages correctly.

To configure Outlook for Internet Mail:

1. Right-click the Outlook icon on the desktop and select **Properties**.
2. Select **Add**.
3. Select **Internet E-mail** and click **OK**.
4. For the Mail Account, enter ***Voicemail***.
5. For User Information enter Voicemail as the Name and for the **E-mail address** enter your address, for example. **voicemail@example.com**.
6. Select the **Servers** tab. Enter the name or IP address of the **Outgoing mail server** and **Incoming mail server**.
7. The **Incoming Mail Server** details can be left blank as Outlook does not need to check for mail. Otherwise, enter the account name and password for example, ***Voicemail***. Select **Remember password**.
8. Select the **Connection** tab. Select **Connect using my local area network (LAN)**. Click **Next**.
9. Click **OK**.
10. Click **Next**.
11. Accept the default path for file creation.
12. Select **Next**, then **Finish** and then **Close**.
13. Open **Outlook**.
14. On the **E-mail Service Option Screen**, select **Internet Only**.
15. Click **Next**.
16. Select **Yes** to register Outlook as the default e-mail application.
17. Select **Tools > Options**.
18. Click the **Preferences** tab.
19. Click **E-mail Options**.
20. Uncheck **Save copies of messages in Sent Items folder**.
    - You might want this option selected during initial setup and troubleshooting. Due to the size of wav file message attachments it is advisable to uncheck it after installation is complete.
21. Log on to the server computer using the account that will be used for the Voicemail Pro server.
22. From Outlook or Outlook Express, send a message direct to an extension user.
23. If this message is received correctly, continue with installing the Voicemail Pro software.

3.3.2.2.5 Configuring Outlook for Exchange Server

This option can be selected if Outlook is to be configured to connect to the Exchange server, using a valid user name and password, while the Voicemail computer remains a member of a work group.

To configure Outlook for Exchange Server:

1. Create a new mailbox on the Exchange server, for example ***Voicemail***, and assign it the same password as has been configured on the voicemail computer.
2. Clear **User must Change password at Next Logon** and select **Password Never Expires**.
3. On the voicemail computer, logon with the ***Voicemail*** account.
4. Right-click the Outlook icon on the desktop and select **Properties**.
5. Select **Add**.
6. Highlight **Microsoft Exchange Server** and click OK.
7. Type in the Exchange server name and enter ***Voicemail*** in the **Mailbox** field.
8. Highlight the **MS Exchange Settings**, Click **Properties**.
9. Highlight **Microsoft Exchange Server**. Click **Properties**.
10. Click **Check name**.
11. If the name is resolved, select **Apply**. Click **OK**, **OK** and **Close** to shut the Mail settings.
12. Do not continue until the name has been resolved correctly with the Exchange server. If the name is not resolved, check the account details with the Exchange administrator.
13. Open **Outlook** and select **Yes** to register Outlook as the default e-mail application.
14. Select **Tools** > **Options**.
15. Choose the **Preferences** tab. Click **E-mail Options**.
16. Uncheck **Save copies of messages in Sent Items folder**.
    - You can keep this option selected during initial setup and troubleshooting. Due to the size of the wav file message attachments, deselect it once the installation is complete.
17. Log on to the server computer using the account that will be used for the Voicemail Pro server.
18. From Outlook or Outlook Express, send a message direct to an extension user.
19. If this message is received correctly, continue with installing the Voicemail Pro software.

3.3.2.2.6 Installing the VoiceMail Pro Software

To install Voicemail Pro software, perform the following steps:

1. Log off and log on using the Voicemail account and password.
2. Install the required Voicemail Pro software.
3. When the system prompts for a User Name and Password for the Voicemail Pro service, enter the Voicemail account details.
4. Restart the server and log on using the Voicemail account.
5. When SMTP e-mail details are requested, enter no values and ignore the error message following the SMTP check.
6. Start the Voicemail Pro Service 23.
7. Check that the basic voicemail services start and operate correctly.

3.3.2.2.7 Switching VoiceMail Pro to MAPI

By default, the Voicemail Pro server is configured for SMTP e-mail mode. However, if MAPI settings are entered it will switch to MAPI mode. Some options are not available if you are working offline. You must be working online to use this feature.

To select the server e-mail mode

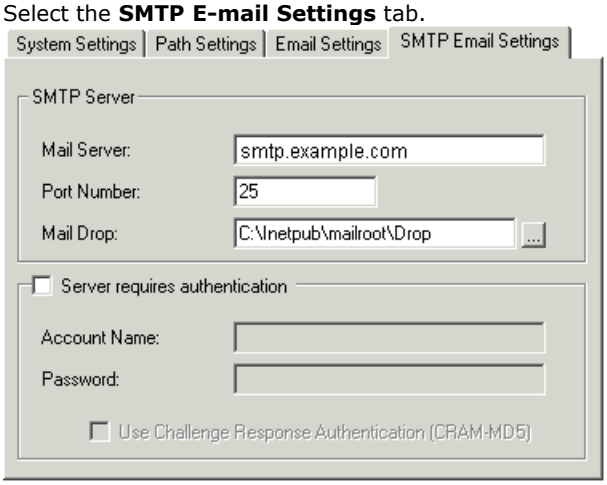
1. Start the Voicemail Pro Client.
2. Click **Preferences** and select **General**.
3. Click the **Email** tab.
4. Select the **MAPI Service** tab.
   a. In the **Address** field, type the IP address of the Windows based computer where the MAPI service is installed.
   b. In the **Port** field, type the default **50792** TCP Port of the Windows based computer where the MAPI service is installed.
5. In the **MAPI** tab.
   a. Select Enable MAPI.
   b. Choose the MAPI e-mail account listed in **Profile**.
6. Click **OK**.

7. Click **Save and Make Live**.

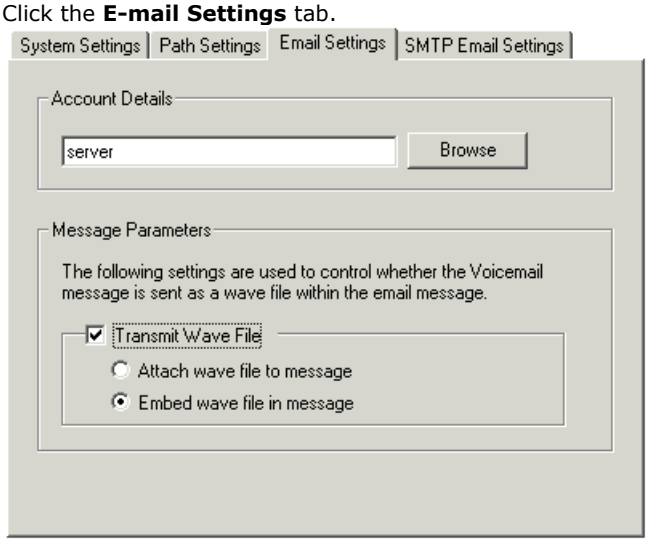
3.3.2.2.8 Changing SMTP Email Account Settings

To change SMTP E-mail Account Settings:

1. Open the Windows **Control Panel**.
2. Select **IP Office Voicemail Pro**.
3. Select the **SMTP E-mail Settings** tab.



4. Enter the settings to match the customer's e-mail server and the e-mail account configured on that server for the Voicemail Pro service.
5. Click the **E-mail Settings** tab.

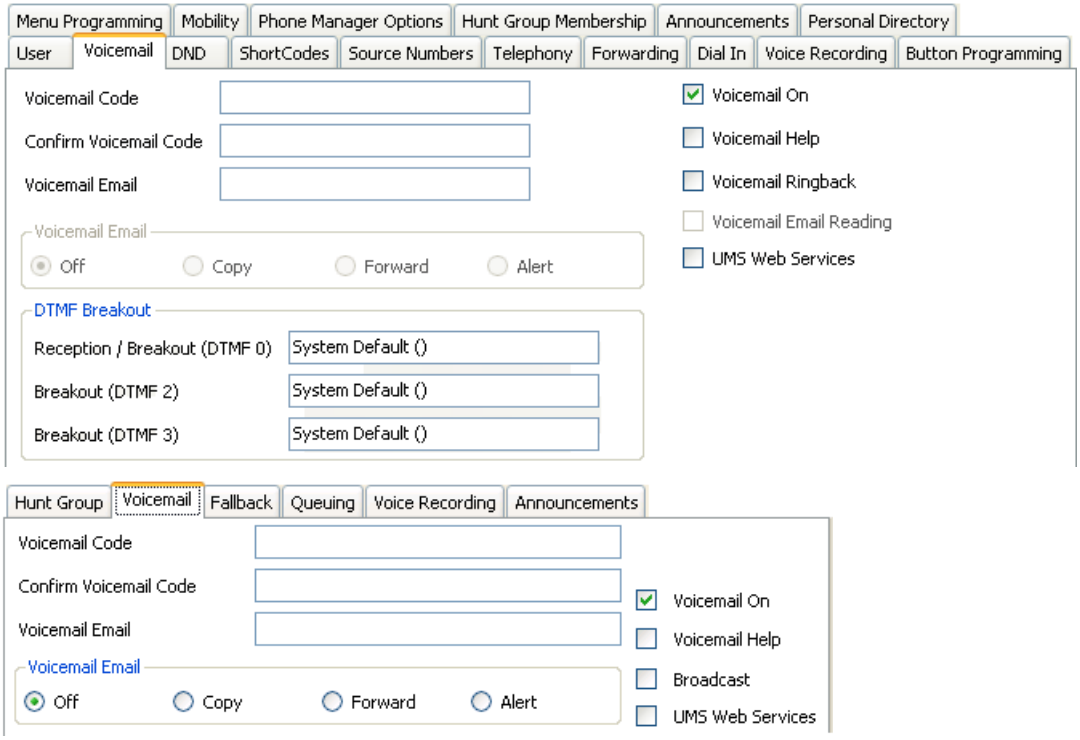


6. Enter the e-mail address for the account setup on the customer's e-mail server for the Voicemail Pro service.
7. Click **Check** to test the connection to the specified e-mail account.
8. Click **OK**.

3.3.3 Voicemail Email Operation

3.3.3.1 User and Group Configuration

The e-mail address for each user and hunt group is set through the IP Office configuration.



- **Voicemail E-mail:** *Default = Blank (No voicemail e-mail features)*
  This field is used to set the user or group e-mail address used by the voicemail server for voicemail e-mail operation. When an address is entered, the additional Voicemail E-mail control below are selectable to configure the type of voicemail e-mail service that should be provided.
  - Use of voicemail e-mail requires the voicemail pro server to have been configured to use either a local MAPI e-mail client or an SMTP e-mail server account. See Voicemail E-mail Installation 23.
  - Use of voicemail e-mail for sending (automatic or manual) e-mail messages with wav files attached requires discretion, as a one-minute message creates a wav file of 1MB size.
- **Voicemail E-mail** *Default = Off*
  If an e-mail address is entered for the user or group, the following options become selectable. These control the mode of automatic voicemail e-mail operation provided by the voicemail server whenever the voicemail mailbox receives a new voicemail message.
  - Users can change their voicemail e-mail mode using visual voice. If the voicemail server is set to IP Office mode, user can also change their voicemail e-mail mode through the telephone prompts. The ability to change the voicemail e-mail mode can also be provided in a call flow using a **Personal Options Menu** action or a **Generic** action.
  - If the voicemail server is set to IP Office mode, users can manually forward a message to e-mail.
  - **Off**
    If off, none of the options below are used for automatic voicemail e-mail. Users can also select this mode by dialing ***03*** from their extension.
  - **Copy**
    If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, a copy of the message is attached to an e-mail and sent to the e-mail address. There is no mailbox synchronization between the e-mail and voicemail mailboxes. For example reading and deletion of the e-mail message does not affect the message in the voicemail mailbox or the message waiting indication provided for that new message.
  - **Forward**
    If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, that message is attached to an e-mail and sent to the e-mail address. No copy of the voicemail message is retained in the voicemail mailbox and their is no message waiting indication. As with Copy, their is no mailbox synchronization between the e-mail and voicemail mailboxes. Users can also select this mode by dialing ***01*** from their extension.

- **UMS Exchange**
  Voicemail Pro 5.0+ supports voicemail e-mail to an Exchange server e-mail account. For users and groups also enabled for UMS Web Services this significantly changes their mailbox operation. The Exchange server inbox is used as their voicemail message store and features such as message waiting indication are set by new messages in that location rather than the voicemail mailbox on the voicemail server. Telephone access to voicemail messages, including Visual Voice access, is redirected to the Exchange server mailbox. See UMS Exchange Server Installation and UMS Exchange.

- **Alert**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, a simple e-mail message is sent to the e-mail address. This is an e-mail message announcing details of the voicemail message but with no copy of the voicemail message attached. Users can also select this mode by dialing ***02** from their extension.

3.3.3.2 How Voicemail Email Messages Look

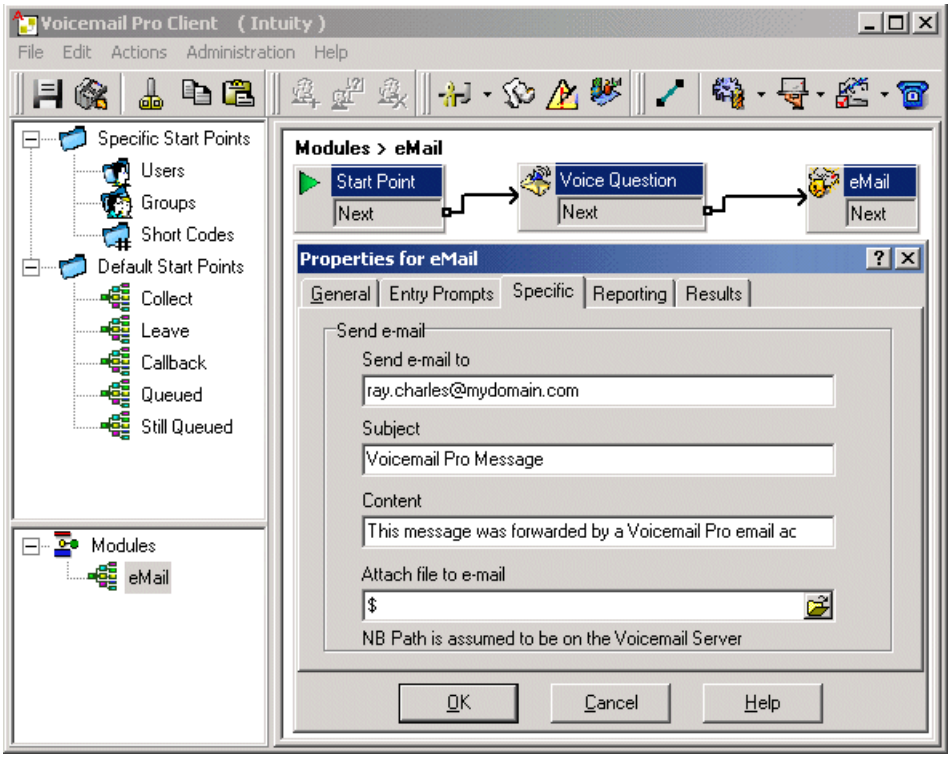
Messages sent by a user or group's voicemail e-mail settings contain the following:

- **To**
  The user/group e-mail address.
- **From**
  The name and address setting of the e-mail client account.
- **Subject**
  `Voicemail Message ('calling number' > 'user name') From:'calling number'.`
- **Body**
  If the user or group's Voicemail E-mail mode is set to Copy or Forward, the message body will contain "`IP Office Voicemail redirected message`".
- **Attachment**
  When using Copy or Forward mode, the message is attached as a wav file.

Messages sent through a Voicemail Pro eMail action are configurable, see The Voicemail Pro eMail Action 38.

3.3.3.3 The Voicemail Pro Email Action

The **eMail** action in Voicemail Pro can be used to send messages through e-mail in response to caller actions in the voicemail call flow. The action can also attach a wav file.



In the example above, the **eMail** action follows a **Voice Question** action. The **$** in the eMail action's **Attach file to e-mail** field instructs it to use the file recorded by the preceding **Voice Question** action.

The same method can be used with a **Leave Mail** action. Note however that the **Leave Mail** action must be set to a valid target mailbox which will then have a copy of the message.

Alternatively, the **eMail** action can attach a prerecorded wav file by specifying the file name. That named file can be created by an **Edit Play List** action.

3.4 Text To Speech (TTS) Installation

The Voicemail Pro server uses Text To Speech (TTS) in the following ways:

- Speak text in call flows using the  **Speak Text** action. The text can include variables passed from other actions including database actions.
- When installed in parallel with Voicemail E-mail 23, TTS can be used to provide email reading 41 to selected mailbox users.
- TTS can be used by the Voicemail Pro client user to record prompts used by call flow actions.

Linux TTS Licensing

All TTS features (E-mail Reading, Speak Text Action, and Prompt Recording) require the VMPro TTS Professional license before they can be used.

Generic TTS Licensing

Voicemail Pro Generic TTS is not supported on Linux.

Languages

For Voicemail Pro 8.0 or higher on Linux, the TTS engine supports the same set of languages as Voicemail Pro speech prompts except for Hungarian, Korean, and Chinese (Cantonese). For these unsupported languages, there will be no alternate languages selected. If any of the three unsupported languages is configured in Voicemail Pro 8.0 or higher, then TTS will not play anything.

Note: If you are using Voicemail Pro installed on Unified Communications Module, see Languages Supported on UC Module Voicemail Pro 16.

If more than one TTS language is installed, use **Select System Prompt Language** action to switch TTS to a different language from the selected default.

3.4.1 Installing Avaya Text to Speech

The TTS engine is packaged as a default component in the Voicemail Pro installation. However, you have to install the languages separately, as no language is installed by default.

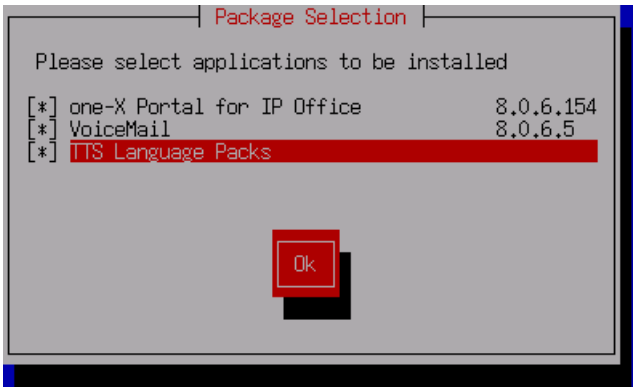
To install Avaya Text To Speech on Linux:

1. Install and test Voicemail Pro as normal.
2. Using IP Office Manager, add the **VMPro TTS Professional** license into the IP Office configuration. Send the new configuration to the IP Office system.
3. Reload the IP Office configuration into IP Office Manager and check that the status of the license has changed to Valid.

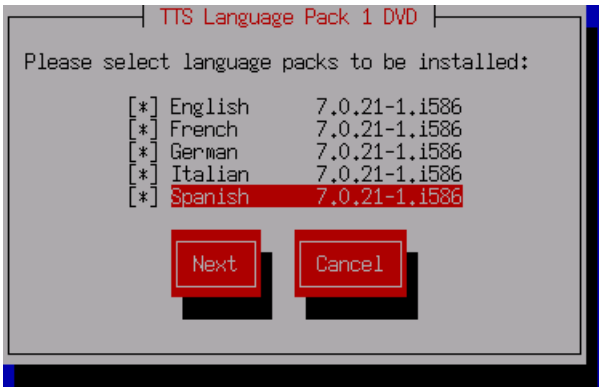
3.4.2 Installing TTS Language Packs

To support languages other than the system defaults, install TTS Language Packs. Proceed as follows to install TTS Language Packs:

1. During the installation of IP Office Application Server, select **TTS Language Packs** on the **Package Selection** screen.



2. When the installation process prompts you, insert one of the TTS Language Pack DVDs.
   The list of languages on the DVD will be displayed.



3. Select the languages that you want to install, and select **Next**.
   After the selected languages are installed, you will be prompted to install more languages.
4. Select **OK** and repeat step 2 40 to step 3 40 for each of the TTS Language Pack DVDs that you have.

5. Select **Cancel** to complete the installation.

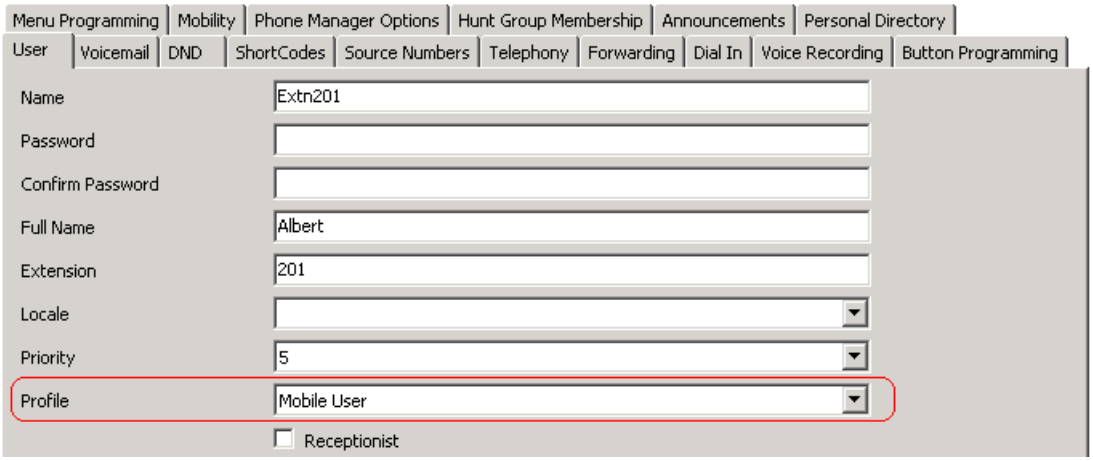
Note: If you choose to install TTS Language Packs at a stage later than the installation of IP Office Application Server, refer to the "Upgrading Applications" section of *Avaya IP Office Application Server Installation and Maintenance* (15-160611).

3.4.3 Setting Up Text To Speech to Read Email

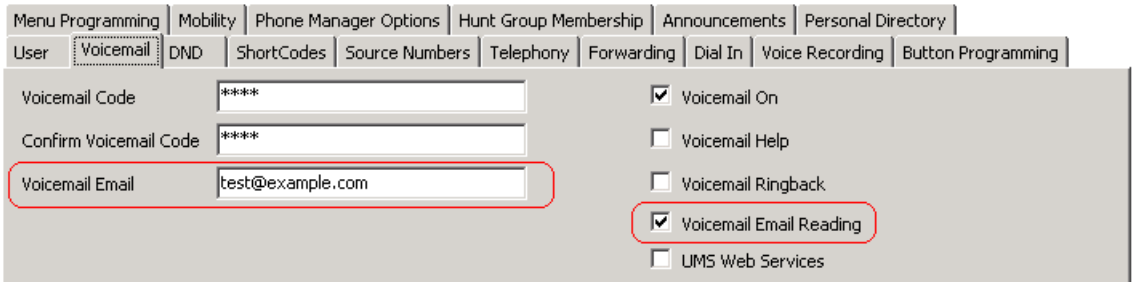
In conjunction with MAPI e-mail clients and Exchange server, TTS can be used to read new e-mails in a user's e-mail inbox when they access their voicemail mailbox.

- The Voicemail Pro server must have been installed and configure to support voicemail e-mail using a MAPI client.
- E-mail reading can only be enabled for IP Office users whose Profile setting is set to Mobile User or Power User. That requires the IP Office to have **Mobile User Profile** or **Power User Profile** licenses.
- This feature is supported only for Intuity mode. Users hear their new voicemail messages and then the number of "Messages with text". Before each e-mail is spoken, details of who it is from, when the message was sent and the size are given. These details assist you in deciding to skip large or non-urgent e-mails.
- E-mail reading cannot be used for e-mails in HTML format. If HTML messages are received, all of the code will be read out as a message.

1. Within the IP Office configuration, display the settings for the user.
2. On the **User** tab, set the user's **Profile** to either **Mobile User** or **Power User**.



3. On the **Voicemail** tab:



- **Voicemail E-mail**
  Enter the user's e-mail address.
- **Voicemail E-mail Reading**
  Enable this option for TTS e-mail reading.

Note: As Voicemail Pro Generic TTS is not supported on Linux, the e-mail reading feature is not available with the VMPro Preferred and VMPro Advanced Editions licenses. You require the VMPro TTS Professional license to be able to use the e-mail reading feature.

3.5 Troubleshooting

3.5.1 Checking the Voicemail Pro Service

The IP Office application services installed on the IP Office Application Server can be started and stopped individually. This is required for maintenance or if a particular service is not currently needed, for example, if one-X Portal for IP Office has been installed but is not currently licensed.

The services can be set to automatically start after a server reboot. By default, all the IP Office services are automatically started.

Starting a Service

1. Log in to the IP Office Application Server Web configuration pages.
2. Select **Home** (this is selected by default after logging in). The services and their current status (running or stopped) are listed.
3. To start a particular service click on the **Start** button next to the service. To start all the services that are not currently running, click on the **Start All** button.

For more information on starting and stopping Application Services see, IP Office Application Server documentation.

3.5.2 Voicemail Pro User Log

For information on viewing user logs, see IP Office Application Server documentation.

Note: If you are using Voicemail Pro installed on Unified Communications Module, see Default Logging Level on UC Module Voicemail Pro 16.

3.5.3 Assigning Permission to Users for MAPI

Use the steps in this section to assign permissions to user accounts to run the MAPI service. To assign permissions, complete the following procedures:

1. Assign Send As permissions 42.
2. Assign additional permissions 42.

Assigning additional permissions

Procedures for assigning permissions are different for the different versions of Exchange Server. Select the procedure that applies to your environment.

- Assigning permissions with Exchange 2003 43
- Assigning permissions with Exchange 2007 44
- Assigning permissions with Exchange 2010 45

3.5.3.1 Assigning Send As Permissions

To assign security permissions to the user under whose account MAPI service is to be executed:

1. Log on to the Active Directory server using an account that has Domain Administrator privileges.
2. Click **Start** | **Administrative Tools** | **Active Directory Users and Computers**.
3. From the **View** drop-down menu, select **Advanced Features**.
4. In the left pane of the **Active Directory Users and Computers** dialog box, right-click the domain and select **Properties**.
5. In the **Properties** dialog box, select the **Security** tab.
6. Click **Advanced**.
7. In the **Advanced Security Settings** dialog box, click **Add**.
8. In the **Select Users, Computers, Service Account**, **or Group** dialog box, add the user's account.
9. Click **OK**.
10. In the **Apply to** field, select **Descendant User objects**.
11. In the **Permissions** box, select **Send As** permissions.
12. Click **OK** to close the **Permission Entry** dialog box.
13. Click **OK** to close the **Advanced Security Settings** dialog box.
14. Click **OK** to close the **Properties** dialog box.

The system periodically applies a security descriptor to the following groups, which results in the **Send As** permissions being removed from these groups.

- Administrators
- Domain Administrators

To prevent the **Send As** permissions from being removed:

1. Click **Start** > **Run**, type **cmd**, and click **OK**.
   Note: You must be a member of the domain administrator group.
2. In the command window, enter the following:

   ```
   dsacls "cn=adminsdholder,cn=system,dc=<xxx>,dc=<yyy>" /G "\<MM Security Group>:CA;Send As"
   ```

   where,

   - `dc=<xxx>,dc=<yyy>` is the customer's fully qualified domain name (for example, `dc=Avaya,dc=com`).
   - `<MAPI>` is the name of the service permissions group.

It will take at least an hour for the security permissions to replicate to the user's account.

3.5.3.2 Assigning Permissions with Exchange 2003

If the user is on Exchange 2003 server, proceed as follows:

1. Modify the advanced security settings for Mailbox Store.
2. Edit the registry to display the Security tab.
   Note: To edit the registry, you must be a member of the domain administrator group.
3. Add the additional permissions to the user account.

Modifying Advanced Security Settings for Mailbox Store

1. Log on to the Active Directory server using an account that has privileges to edit permissions (such as administrator).
2. Click **Start** | **All Programs** | **Microsoft Exchange** | **System Manager**.
3. In the left pane of the **Exchange System Manager** window, expand the **Servers** node in the tree.
4. Expand the server node in the list, and then expand the **First Storage Group** node.
5. Right-click **Mailbox Store** and select **Properties**.
6. In the **Security** tab of the **Properties** dialog box, click **Advanced**.
7. Under the **Permissions** tab of the **Advanced Security Settings** window, change all the **Permission Entries** to **Allow**.
8. Restart the computer.

Editing the registry

If you are using Exchange System Manager or Active Directory Sites and Services, the Security tab for the Exchange organization container and a few sub-containers are not visible. To enable the Security tab at all levels within the Microsoft Exchange container, you can update the registry.

1. Log on as the Microsoft Exchange administrator.
2. Click **Start** > **Run**.
3. In the **Run** dialog box, in the **Open** field, type **regedit**.
4. Press **Enter**.
5. In the **Registry Editor** dialog box, locate the following key:
   "HKEY_CURRENT_USER\Software\Microsoft\Exchange\ExAdmin"
6. Right-click **ExAdmin** and select **New** > **DWORD Value**.
7. Enter the following value name: **ShowSecurityPage**.
8. Double-click the **ShowSecurityPage** value.
9. In the **Edit DWORD Value** dialog box, set the Value data to **1**.
10. Click **OK**.

Adding permissions with Exchange 2003

Proceed as follows to add the additional permissions to the user's account:

1. Log on to the Active Directory server using an account that has privileges to assign permissions to accounts (such as administrator).
2. Click **Start** | **Administrative Tools** | **Active Directory Sites and Services**.

3. In the left pane, select **Active Directory Sites and Services**.
4. From the **View** drop-down menu, select **Show Services Node**.
5. In the left pane, expand **Services**, expand **Microsoft Exchange**, and then locate the appropriate Exchange Organization object that MAPI will connect to.
6. Right-click and select **Properties**.
7. In the **Properties** dialog box, click the **Security** tab.
   Note: This tab is visible only if you have edited the registry (see Editing the registry 43).
8. Click **Add**.
9. In the **Select Users, Computers, Service Accounts, or Groups** dialog box, add the user's account.
10. Click **OK**.
11. Under **Permissions**, select the permissions that you want to assign to the user's account.
    - Read
    - Execute
    - Read permissions
    - Create children
    - List contents
    - Read properties
    - Write properties
    - Administer information store
    - Create named properties in the information store
    - View information store status
    - Receive As
    - Send As
12. Click **Apply**.
13. Click **OK**.
14. Close the **Active Directory Sites and Services** dialog box.
15. Wait for the directory cache to expire.

3.5.3.3 Assigning Permissions with Exchange 2007

If user account is on Exchange 2007 server, proceed as follows to assign additional permissions to the user account:

1. Verify that the user to be added is a member of the Exchange recipient Administrator group.
2. Log on to the Active Directory server using an account that has privileges to assign permissions to accounts (such as administrator).
3. Click **Start** | **Administrative Tools** | **Active Directory Sites and Services**.
4. In the left pane, select **Active Directory Sites and Services**.
5. From the **View** pull-down menu, select **Show Services Node**.
6. In the left pane, expand **Services**, expand **Microsoft Exchange**, and then locate the appropriate Exchange Organization.
7. Right-click it and select **Properties**.
8. In the Properties window, click the **Security** tab.
   The Security tab may not be visible in an environment with both Exchange 2003 and Exchange 2007 mail servers. To enable the Security tab, see Editing the registry 43.
9. Click **Add**.
10. In the **Select Users, Computers, Service Accounts, or Groups** window, add the user's account.
11. Click **OK**.
12. Under **Permissions for the group**, select **Read** and click **Apply**.
13. Click **Advanced**.
14. In the **Advanced Security Settings** window, on the **Permissions** tab, select the check box at the bottom of the window. This will apply the permissions inherited from the parent to this object and its child objects.
15. Click **Add** and add the user's account.
16. Click **OK**.
17. In the **Apply to** field, select **This object and all descendant objects**.

18. Verify that the following box is **not selected**: **Apply these permissions to objects and/or containers within this container only**.
19. In the **Permissions** field, select the required permissions.
    - List contents
    - Read all properties
    - Write all properties
    - Read permissions
    - Create all child objects
    - Administer information store
    - Create named properties in the information store
    - Receive As
    - Send As
    - View information store status

For a mixed environment of Exchange 2003 and Exchange 2007 mail servers, also select the following permissions, which are only displayed for Exchange 2007 in the mixed environment:

- Read
- Execute

20. Click **OK**.

3.5.3.4 Assigning Permissions with Exchange 2010

If user account is on Exchange 2010 server, proceed as follows to assign additional permissions to the user account:

1. Verify that the user to be added is a member of the Exchange recipient Administrator group.
2. Log on to the Active Directory server using an account that has privileges to assign permissions to accounts (such as administrator).
3. Click **Start** | **Administrative Tools** | **Active Directory Sites and Services**.
4. In the left pane, select **Active Directory Sites and Services**.
5. From the **View** pull-down menu, select **Show Services Node**.
6. In the left pane, expand **Services**, expand **Microsoft Exchange**, right-click the appropriate Exchange Organization, and select **Properties**.
7. In the **Properties** window, click the **Security** tab.
   The **Security** tab may not be visible in an environment with both Exchange 2003 and Exchange 2010 mail servers. To enable the Security tab, see Editing the registry 43.
8. Click **Add**.
9. In the **Select Users, Computers, Service Accounts, or Groups** window, add the user's account.
10. Click **OK**.
11. Under **Permissions for the group**, select **Read** and click **Apply**.
12. Click **Advanced**.
13. In the **Advanced Security Settings** window, on the **Permissions** tab, select the check box at the bottom of the window. This will apply the permissions inherited from the parent to this object and its child objects.
14. Click **Add** and add the user's account.
15. Click **OK**.
16. In the **Apply to** field, select **This object and all descendant objects**.
17. Verify that the following box is not selected: **Apply these permissions to objects and/or containers within this container only**.
18. In the **Permissions** field, select the required permissions.
    - List contents
    - Read all properties
    - Write all properties
    - Read permissions
    - Create all child objects
    - Administer information store
    - Create named properties in the information store

- Receive As
- Send As
- View information store status

For a mixed environment of Exchange 2003 and Exchange 2010 mail servers, also select the following permissions, which are only displayed for Exchange 2010 in the mixed environment:

- Read
- Execute

19. Click **OK**.

Chapter 4.

Using the Voicemail Pro Client

4. Using the Voicemail Pro Client

The Voicemail Pro client is used to administer the Voicemail Pro server. This section covers the basic operation of the Voicemail Pro client to connect to a Voicemail Pro server. For details on administration using the Voicemail Pro client, see *Avaya IP Office Administering Voicemail Pro* (15-601063).

For a Linux based server, the client must be installed on a separate Windows computer and then be used to administer the server remotely.

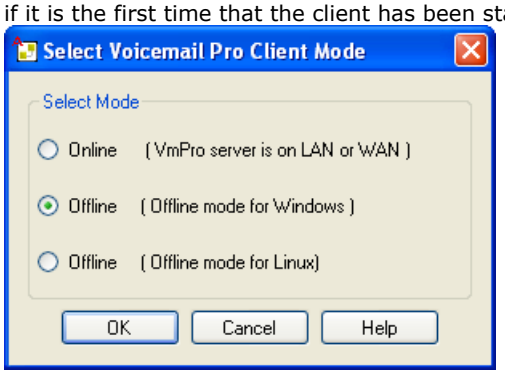
4.1 Logging in to the Voicemail Pro Server

If you start the Voicemail Pro client on the same computer as the voicemail server, the system will automatically load the settings to manage the server. You will have full access to all the servers settings, you do not need to login with an administrator account name and password.

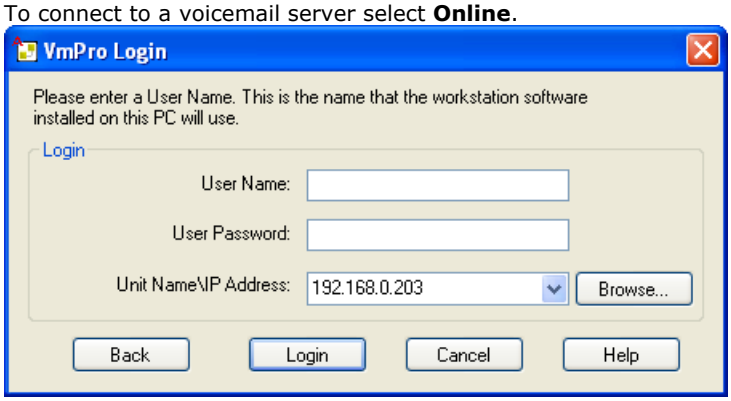
To connect to a remote voicemail server you will need to login using the name and password of an administrator account already configured on that server. The default account is ***Administrator*** and ***Administrator***. After logging in with this account you should change the password from that default value.

To Start the Voicemail Pro Client

1. From the **Start** menu, select **Programs** | **IP Office** | **Voicemail Pro Client**.
2. The Voicemail Pro Client window opens.
   - If the client has been started before, it will start in the same mode as it used previously. If it fails to do that or if it is the first time that the client has been started, the select mode menu is displayed.

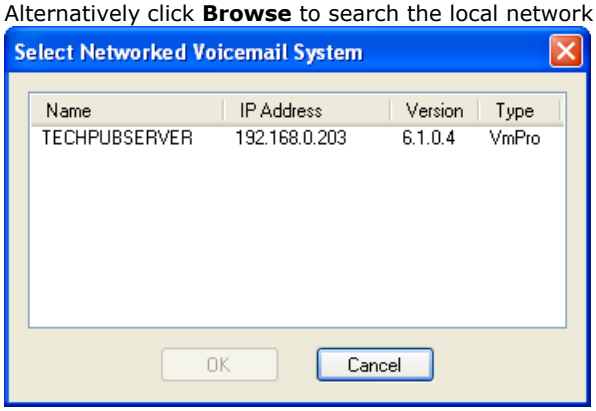


   - Select either of the **Offline** modes to import and export voicemail call flow and module files without being connected to any voicemail server. In the option **Offline mode for Linux**, those call flow options not supported by a Linux base voicemail server are grayed out.
   - To connect to a voicemail server select **Online**.



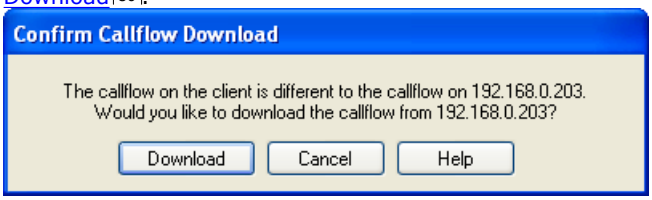
     - Enter the name and password for an administrator account on the voicemail server.
       - Note that these are not required is accessing a voicemail server on the same computer as the client.
       - The default account is ***Administrator*** and ***Administrator***. After logging in with this account you should change the password from that default value.
       - If three consecutive login attempts fail for an administrator account name, the account is locked for an hour.
     - In the **Unit Name\IP Address** field enter the DNS name or IP address of the voicemail server.
       Note: If you are connecting to Voicemail Pro server installed on Unified Communications Module, see Accessing UC Module Voicemail Pro 16.

- Alternatively click **Browse** to search the local network for a server and select a server from the results.



Note: As Voicemail Pro client cannot find Voicemail Pro server running on Unified Communications Module, you cannot use **Browse** to connect to Voicemail Pro server installed on Unified Communications Module.

3. If connected to a remote server, the **Confirm Callflow Download** window will be displayed. If you select Download, any existing call flow that you have loaded in the client will be overwritten. For more details see Callflow Download 50.



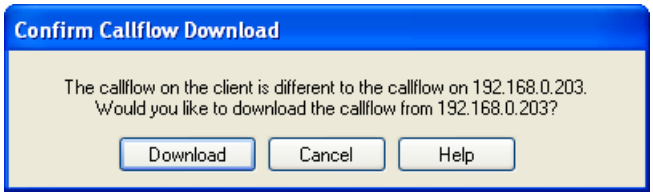
4. If this is the first time that the voicemail server has been logged into, you should first change the default remote access account.
   - If you logged in remotely using the default account, select **File** | **Change Password**.
   - If you logged in locally, select **Voicemail Pro Administrators** in the navigation panel.

4.2 Confirm Call Flow Download Window

When you connect to a server across a LAN or WAN to view or modify the call flow on the server, a check is made to see if the call flow that is stored locally on the client is the same. The call flow on the server might be different to the call flow on the client because:

- The local call flow is older than the version on the server, for example if the call flow on the server has been modified by another Client connection.
- The local call flow is newer than the version on the server, for example if the call flow on the server has been worked on while the local Client was being used in offline mode.
- The local call flow is from a different server, for example if you are connecting to a different server to the one from which the call flow was previously downloaded.

If the call flow is the same, no data will need to be copied from the server to the client. If the call flow is different you can chose to download the call flow from the server or to use the local call flow.



- **Download**
  Click to download the call flow from the server.
- **Cancel**
  Click this if you do not want to download the call flow from the server.

To upload the local call flow to the server, use the **Save** or **Save and Make Live** options from the **File** menu. See Saving Changes and Making them Live 51.

4.3 Continue Offline Message Window

Only one Voicemail Pro client can be connected to a voicemail server at any time. To prevent an idle client session from blocking the server, a Client/Server Connection Timeout (mins) 67 setting is used to disconnect the idle client session. By default, the timeout is set to 5 minutes.

If your Voicemail Pro client session has timed out, the Voicemail Pro client will prompt you whether to re-establish the session or close. You are then able to continue working in offline mode or to close the client.

4.4 Saving Changes and Making them Live

The call flow settings shown and edited using the Voicemail Pro client are stored in a database file (**Vmdata.mdb**) on the voicemail server. However, when edited, the changes are not automatically applied to the operation of the voicemail server. Instead the database file must be converted to a separate file (Root.vmp), that being the file that is used by the voicemail server for its current operation.

To Save the Configuration and Make It Live

1. Choose **Save & Make Live** to save the settings as the **Root.vmp** file used by the voicemail server.
   - If you are working remotely in **Offline** mode, you will be prompted to select whether to save your changes to the local database or to the remote server.

To Save the Configuration to a File Without Making It Live

Call flow settings can be saved to a ***.vmp*** file and then included in the operation of another voicemail system.

1. Choose **Save as** to save the database as a **.vmp** file with the name that you specify. You can then copy the file to other systems.

4.5 Logging Out

It can be useful to connect to a system to download the current system configuration and then disconnect and make changes offline. You can then test configuration changes offline before applying them to a live system.

- Logging out is not the same as closing down with the **Exit** option. See Closing Down 51.
- If the Client and Server are installed on the same computer, the **Log Out** option is not available.

To Log Out

1. From the **File** menu, select **Log Out**.
2. You are logged out of the Voicemail Pro server and placed in offline mode. You can either make configuration changes offline and then log back in when you are ready or log on to a different server to work. See Logging in to the Voicemail Pro Server 48.

4.6 Closing Down

When you have finished working, you can close down the Voicemail Pro Client.

To Close the Voicemail Pro Client

1. From the File menu, select **Exit**.
2. If you have not made any changes, the Voicemail Pro Client closes and you are returned to the desktop. If you have made any changes, you are prompted whether to save the changes.
3. If you do not want to save the changes, click **No**. No changes are saved. If you want to save the changes, click **Yes** . The changes are saved but not made live.
4. If you want to make the changes live, click **Save & make Live**.

Chapter 5.
IP Office Configuration

5. IP Office Configuration

The default IP Office configuration settings support almost immediate voicemail operation as soon as a voicemail server is running on the LAN. Those default settings are:

- Voicemail running on a computer accessible by the IP Office using a broadcast address of 255.255.255.255.
- Voicemail on for each user and hunt group on.
- No Voicemail Code set for any mailboxes. Until a code is entered for a mailbox, it can only be accessed from the user's own extension.
- No Voicemail E-mail or Voicemail Help operation.
- No Voicemail Reception numbers set for user mailboxes.
- Hunt group mailboxes are created and used by default but there is no default message waiting indication or method for collecting messages. A method for accessing each hunt group mailbox should be programmed.

5.1 User and Group Mailboxes

The voicemail server creates mailboxes based on the user and hunt group names that are entered in the IP Office Manager application. Whenever the Voicemail Pro is restarted or the IP Office configuration is changed, new mailboxes are created for any new names that are found.

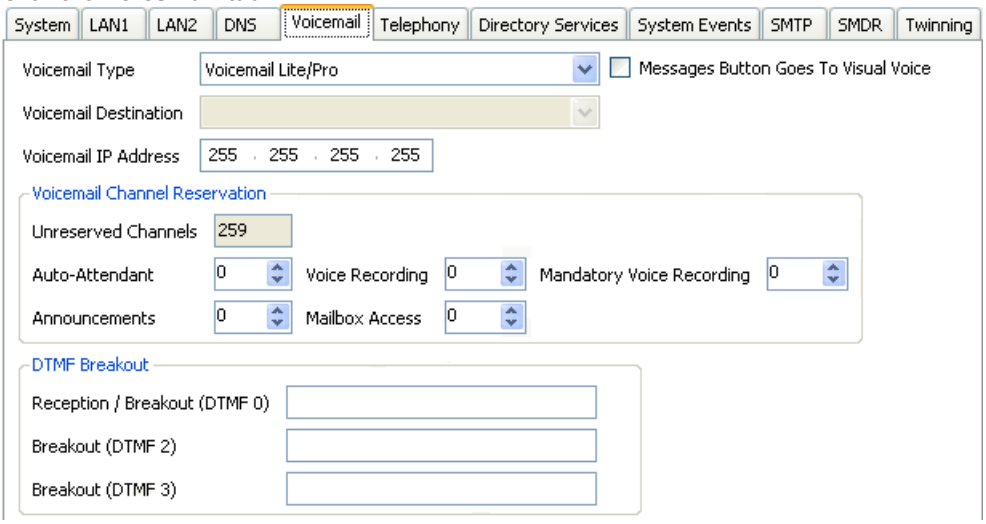
This method of operation has the following consequences:

- **Mailboxes are based on names**
  For all users and groups, if their name is changed or deleted, they are no longer associated with their former mailbox and any associated Voicemail Pro start points.
- **Voicemail is case sensitive**
  If a mailbox or start point name is entered incorrectly in IP Office Manager or Voicemail Pro, the intended operation will not occur and the call may be disconnected.
- **Voicemail removes spaces at the end of mailbox names**
  If spaces are left at the end of a mailbox user's name in IP Office Manager, when the mailboxes are created, the space at the end of the name is dropped. When this occurs the mailbox cannot be found as there is a mismatch between the user name and directory.

5.2 System Settings

The IP Office can work with several different types of voicemail server. Therefore it is important to check that it is configured for operation with Voicemail Pro.

1. In IP Office Manager, select **System**.
2. Click the **Voicemail** tab.



- **Voicemail Type**
  Specifies the type of voicemail system the IP Office is configured to work with. Unless detailed otherwise, the option ***Voicemail Lite/Pro*** should be used with Voicemail Pro server. Additional options are displayed depending on the selected voicemail type.
  - **Centralized Voicemail** 81
    This setting is used for remote systems in a Small Community Network where the central voicemail server is being hosted by another IP Office. The **Voicemail Destination** field below is used to enter the **Outgoing Group ID** of the SCN trunk to the IP Office hosting the central voicemail server.
  - **Distributed Voicemail** 85 *(Software level = IP Office Release 6)*
    This option is used in a Small Community Network for remote IP Offices that you want to be associated with their own voicemail servers in addition to the central voicemail server. The IP Office will require licenses for Voicemail Pro operation and for the voicemail features required. The **Voicemail IP Address** below is used to enter the IP address of the IP Office's voicemail server while the **Voicemail Destination** field below is still used to set location of the central voicemail server as for centralized voicemail.
  - **Embedded Voicemail**
    Not used with Voicemail Pro.
  - **Group Voicemail**
    Not used with Voicemail Pro.
  - **Remote Audix Voicemail**
    Not used with Voicemail Pro.
  - **Voicemail Lite/Pro**
    This is the normal setting used for Voicemail Pro.
- **Voicemail IP Address**
  By default the IP Office connects to the Voicemail Pro server by using the address 255.255.255.255 to broadcast for any server on the same LAN as itself. When it receives a response it will use that voicemail server. However you can set this access to a specific address. Change the default address (*255.255.255.255*) to the IP address of the computer on which the Voicemail Pro server is running.
  Note: If you are using Voicemail Pro installed on Unified Communications Module, see Voicemail IP Address on UC Module Voicemail Pro 16.
  - For configuration of IP Office systems using centralized Voicemail Pro in an IP Office Small Community Network (SCN), see Centralized Voicemail Pro 80.
- **Message Button Go To Visual Voice**
  Many Avaya telephones have a fixed button labeled **MESSAGES** which can be used by the telephone user to access their mailbox. If this option is selected, then on telephones able to support Visual Voice, visual voice is used when the button is pressed rather than the standard voice prompt interface.
- **Voicemail Channel Reservation**
  For calls going to voicemail from the IP Office, the IP Office can restrict how many sessions of various types are active at the same time. See Voicemail Channel Reservation 63.

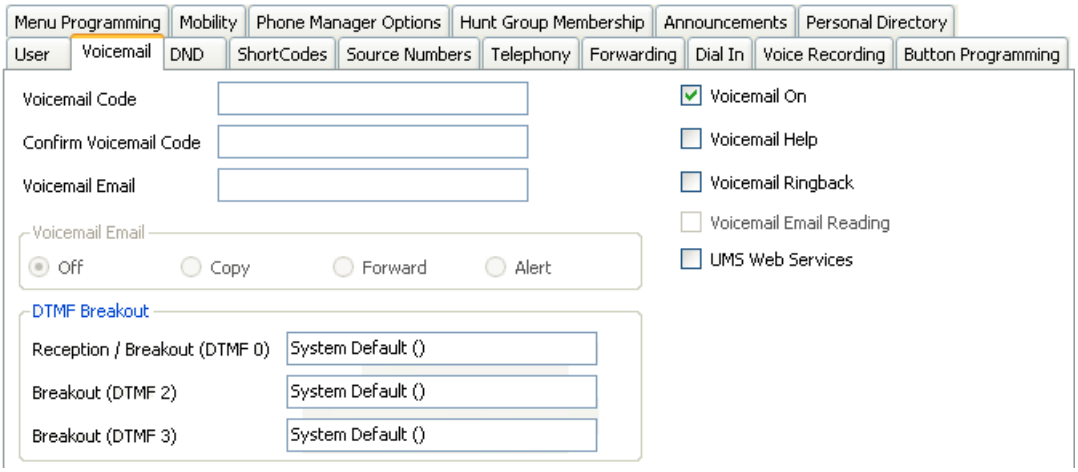
- **DTMF Breakout** *(IP Office 5.0)*
  Previous breakout numbers for a user mailbox were set through the user voicemail settings 58. IP Office 5.0+ supports system defaults to be set. These are then applied to all user mailboxes unless the users own settings differ.
  - **Reception / Breakout (DTMF 0)**
    The number to which a caller is transferred if they press ***0*** while listening to the mailbox greeting rather than leaving a message (****0*** on embedded voicemail).
    - For systems set to Intuity emulation mode, the mailbox user can also access this option when collecting their messages by dialing ****0***.
    - If the mailbox has been reached through a call flow containing a **Leave Mail** action, the option provided when 0 is pressed are:
      - For IP Office mode, the call follows the **Leave Mail** action's ***Failure*** or ***Success*** results connections depending on whether the caller pressed 0 before or after the record tone.
      - For Intuity mode, pressing 0 always follows the **Reception / Breakout (DTMF 0)** setting.
  - **Breakout (DTMF 2)**
    The number to which a caller is transferred if they press ***2*** while listening to the mailbox greeting rather than leaving a message (****2*** on embedded voicemail). For pre-5.0 systems this option is not support for Voicemail Pro running in IP Office mailbox mode.
  - **Breakout (DTMF 3)**
    The number to which a caller is transferred if they press ***3*** while listening to the mailbox greeting rather than leaving a message (****3*** on embedded voicemail). For pre-5.0 systems this option is not support for Voicemail Pro running in IP Office mailbox mode.
- **SIP Settings**
  These options are available when the IP Office configuration contains a SIP line or an H323 SCN line. The values are used when the voicemail server makes calls using a SIP trunk or to a SIP device.
  - **SIP Name:** *Default = User name.*
    The value from this field is used when the **From** field of the SIP URI being used for a SIP call is set to ***Use Internal Data***.
  - **SIP Display Name (Alias):** *Default = User name.*
    The value from this field is used when the **Display Name** field of the SIP URI being used for a SIP call is set to ***Use Internal Data***.
  - **Contact:** *Default = User name.*
    The value from this field is used when the **Contact** field of the SIP URI being used for a SIP call is set to ***Use Internal Data***.
  - **Anonymous:** *Default = Off.*
    If the From field in the SIP URI is set to ***Use Internal Data***, selecting this option inserts ***Anonymous*** into that field rather than the SIP Name set above.

3. Click **OK** to save any changes.
4. Send the configuration back to the IP Office.

5.3 User Voicemail Settings

Voicemail can be configured for each individual user in IP Office Manager.

1. Open IP Office Manager.
2. In the Navigation pane, click **User** and select the individual user.
3. Select the **Voicemail** tab.



- **Voicemail Code / Confirm Voicemail Code**
  These fields are used to set or change the user's mailbox passcode.
  - If the voicemail server is set to ***Intuity Emulation*** mode, mailbox users are asked to set a voicemail code the first time that they access the mailbox.
- **Voicemail On** *Default = On*
  When on, the mailbox is used by the IP Office to answer the user's unanswered calls or calls when the user's extension returns busy. Note that selecting off does not disable use of the user's mailbox. Messages can still be forward to their mailbox and recordings can be placed in it. The mailbox can also still be accessed to collect messages.
- **Voicemail Help** *Default = Off*
  For voicemail systems running IP Office mailbox mode, this option controls whether users retrieving messages are automatically given an additional prompt *"For help at any time press 8."* If switched off, users can still press 8 for help. For voicemail systems running in Intuity emulation mode, this option has no effect. On those systems the default access greeting always includes the prompt *"For help at any time, press *4"* (*H in the US locale).
- **Voicemail Ringback** *Default = Off*
  When on, if the user has a new message, the voicemail server can call the user's extension whenever the extension changes from off-hook to on-hook. The voicemail server will not ring the extension more than once every 30 seconds.
- **Voicemail E-mail:** *Default = Blank (No voicemail e-mail features)*
  This field is used to set the user or group e-mail address used by the voicemail server for voicemail e-mail operation. When an address is entered, the additional Voicemail E-mail control below are selectable to configure the type of voicemail e-mail service that should be provided.
  - Use of voicemail e-mail requires the voicemail pro server to have been configured to use either a local MAPI e-mail client or an SMTP e-mail server account. See Voicemail E-mail Installation 23.
  - Use of voicemail e-mail for sending (automatic or manual) e-mail messages with wav files attached requires discretion, as a one-minute message creates a wav file of 1MB size.
- **Voicemail E-mail** *Default = Off*
  If an e-mail address is entered for the user or group, the following options become selectable. These control the mode of automatic voicemail e-mail operation provided by the voicemail server whenever the voicemail mailbox receives a new voicemail message.
    - Users can change their voicemail e-mail mode using visual voice. If the voicemail server is set to IP Office mode, user can also change their voicemail e-mail mode through the telephone prompts. The ability to change the voicemail e-mail mode can also be provided in a call flow using a **Personal Options Menu** action or a **Generic** action.
    - If the voicemail server is set to IP Office mode, users can manually forward a message to e-mail.
  - **Off**
    If off, none of the options below are used for automatic voicemail e-mail. Users can also select this mode by dialing ****03*** from their extension.

- **Copy**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, a copy of the message is attached to an e-mail and sent to the e-mail address. There is no mailbox synchronization between the e-mail and voicemail mailboxes. For example reading and deletion of the e-mail message does not affect the message in the voicemail mailbox or the message waiting indication provided for that new message.
- **Forward**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, that message is attached to an e-mail and sent to the e-mail address. No copy of the voicemail message is retained in the voicemail mailbox and their is no message waiting indication. As with Copy, their is no mailbox synchronization between the e-mail and voicemail mailboxes. Users can also select this mode by dialing ***01*** from their extension.
  - **UMS Exchange**
    Voicemail Pro 5.0+ supports voicemail e-mail to an Exchange server e-mail account. For users and groups also enabled for UMS Web Services this significantly changes their mailbox operation. The Exchange server inbox is used as their voicemail message store and features such as message waiting indication are set by new messages in that location rather than the voicemail mailbox on the voicemail server. Telephone access to voicemail messages, including Visual Voice access, is redirected to the Exchange server mailbox. See UMS Exchange Server Installation and UMS Exchange.
- **Alert**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, a simple e-mail message is sent to the e-mail address. This is an e-mail message announcing details of the voicemail message but with no copy of the voicemail message attached. Users can also select this mode by dialing ***02*** from their extension.

- **UMS Web Services**
  If selected, the user is able to use UMS to access their mailbox. Using the UMS options, messages can be accessed via a web browser, an IMAP compatible e-mail application, or an Exchange server e-mail account. The use this function is subject to licenses.
- **DTMF Breakout**
  When a caller is directed to voicemail to leave a message, they can be given the option to be transferred to a different extension. The greeting message needs to be recorded telling the caller the options available. The extension numbers that they can be transferred to are entered in the fields below. For IP Office 5.0+, these system default values can be set for these numbers and are used unless a different number is set within these user settings.
  - **Reception / Breakout (DTMF 0)**
    The number to which a caller is transferred if they press ***0*** while listening to the mailbox greeting rather than leaving a message (***0*** on embedded voicemail).
    - For systems set to Intuity emulation mode, the mailbox user can also access this option when collecting their messages by dialing ***0***.
    - If the mailbox has been reached through a call flow containing a **Leave Mail** action, the option provided when 0 is pressed are:
      - For IP Office mode, the call follows the **Leave Mail** action's ***Failure*** or ***Success*** results connections depending on whether the caller pressed 0 before or after the record tone.
      - For Intuity mode, pressing 0 always follows the **Reception / Breakout (DTMF 0)** setting.
  - **Breakout (DTMF 2)**
    The number to which a caller is transferred if they press ***2*** while listening to the mailbox greeting rather than leaving a message (***2*** on embedded voicemail). For pre-5.0 systems this option is not support for Voicemail Pro running in IP Office mailbox mode.
  - **Breakout (DTMF 3)**
    The number to which a caller is transferred if they press ***3*** while listening to the mailbox greeting rather than leaving a message (***3*** on embedded voicemail). For pre-5.0 systems this option is not support for Voicemail Pro running in IP Office mailbox mode.

4. Click **OK** to save the voicemail changes for the user.
5. Amend any other user details, then save and merge the configuration changes.

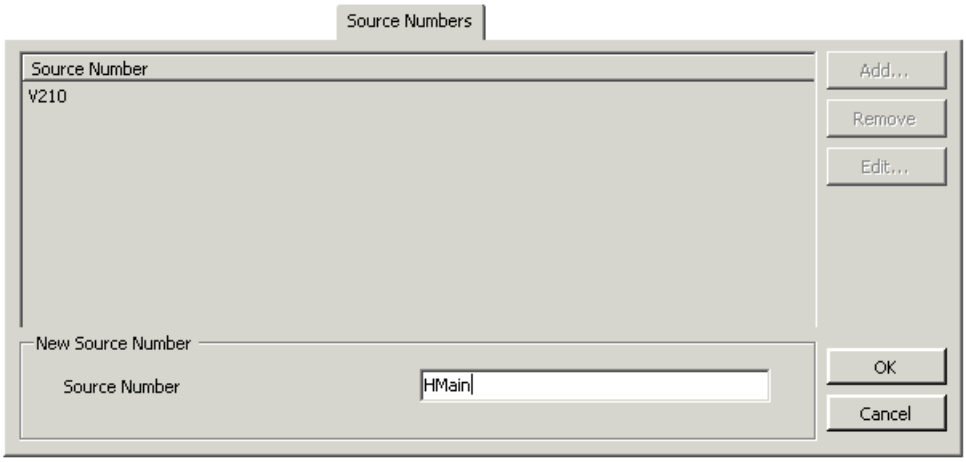
5.4 User Source Numbers

The Source numbers can be changed for individual users in IP Office Manager. The Source Numbers tab gives a list of Dial In Source Numbers. Several of these numbers can relate to voicemail operation. The source number settings that can be used for Voicemail Pro are:

- **V<*Caller's ICLID*>** = Voicemail Trusted Source Access.
  Strings prefixed with a v indicate numbers from which access to the user's mailbox does not require entry of the mailbox's voicemail code.
  - When in Intuity mode users will still have to enter their voicemail code if they use the Messages button on their telephone. However, If they have a button programmed to collect voicemail they can access their mailbox without entering their voicemail code.
- **H<*Group Name*>** = Hunt Group Voicemail Indication.
  Configures the user to receive message waiting indication for new group messages. Enter **H** followed by the group name, for example ***HMain*** for the group Main.
- **P<*Telephone Number*>** = Voicemail Ringback Number.
  This entry sets the destination for callback (outbound alert) calls from voicemail. Enter **P** followed by the telephone number including any external dialing prefix, for example ***P917325559876***. This facility is only available when using Voicemail Pro through which a default Callback or a user specific Callback start point has been configured. This feature is separate from voicemail ringback which alerts the user's own extension.

To add a source number:

1. Open IP Office Manager.
2. In the Navigation pane, click **User** and select the individual user.
3. View the **Source Numbers** tab.
4. Click **Add**.



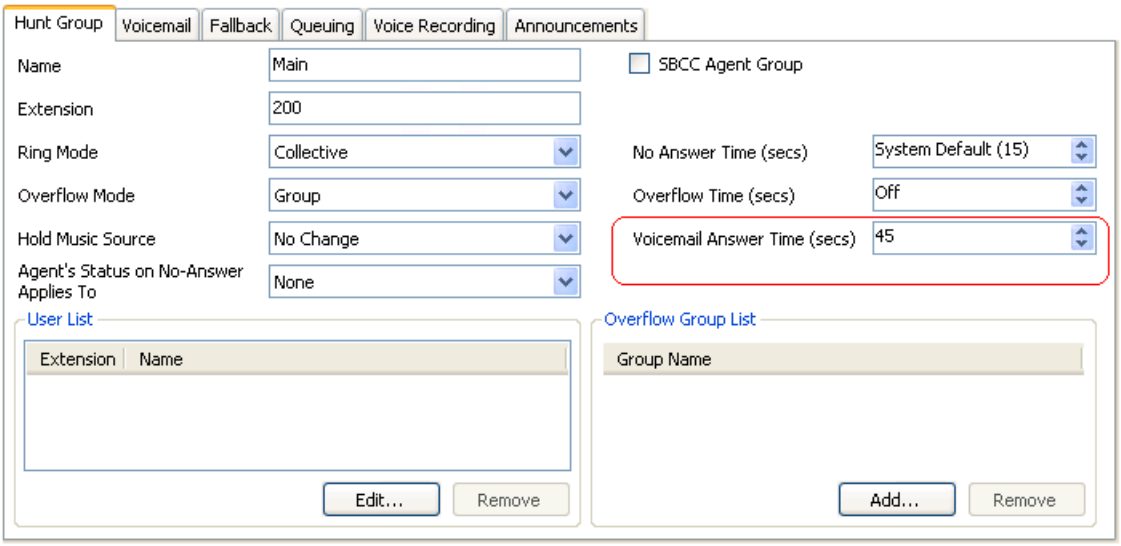
5. Enter the number in the **Source Number** field at the bottom of the window.
6. Click **OK** and save the configuration file.

5.5 Hunt Group Settings

Voicemail can be configured for each hunt group on the IP Office system. This section looks at the basic voicemail settings.

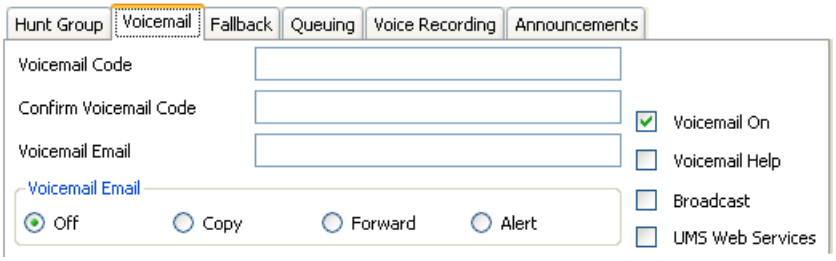
Voicemail Answer Time

For IP Office 4.0+, the condition under which calls targeted to a hunt group go to voicemail has been changed to a timeout. For calls waiting to be answered, once this timeout expires the call is redirected to voicemail regardless of where it is in the hunt group.



Hunt Group Settings

1. Open IP Office Manager.
2. In the Navigation pane, click  **Hunt Group** and select the hunt group.
3. Select the **Voicemail** tab.



- **Voicemail Code / Confirm Voicemail Code**
  Enter a voicemail code between 1-15 digits in the **Voicemail Code** field. This is required when users retrieve voicemail messages for the hunt group remotely, for example from an extension that is not a member of the hunt group or from an external telephone.
- **Voicemail E-mail:** *Default = Blank (No voicemail e-mail features)*
  This field is used to set the user or group e-mail address used by the voicemail server for voicemail e-mail operation. When an address is entered, the additional Voicemail E-mail control below are selectable to configure the type of voicemail e-mail service that should be provided.
  - Use of voicemail e-mail requires the voicemail pro server to have been configured to use either a local MAPI e-mail client or an SMTP e-mail server account. See Voicemail E-mail Installation 23.
  - Use of voicemail e-mail for sending (automatic or manual) e-mail messages with wav files attached requires discretion, as a one-minute message creates a wav file of 1MB size.
- **Voicemail E-mail** *Default = Off*
  If an e-mail address is entered for the user or group, the following options become selectable. These control the mode of automatic voicemail e-mail operation provided by the voicemail server whenever the voicemail mailbox receives a new voicemail message.
  - Users can change their voicemail e-mail mode using visual voice. If the voicemail server is set to IP Office mode, user can also change their voicemail e-mail mode through the telephone prompts. The ability to change the voicemail e-mail mode can also be provided in a call flow using a **Personal Options Menu** action or a **Generic** action.
  - If the voicemail server is set to IP Office mode, users can manually forward a message to e-mail.

- **Off**
  If off, none of the options below are used for automatic voicemail e-mail. Users can also select this mode by dialing ***03*** from their extension.
- **Copy**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, a copy of the message is attached to an e-mail and sent to the e-mail address. There is no mailbox synchronization between the e-mail and voicemail mailboxes. For example reading and deletion of the e-mail message does not affect the message in the voicemail mailbox or the message waiting indication provided for that new message.
- **Forward**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, that message is attached to an e-mail and sent to the e-mail address. No copy of the voicemail message is retained in the voicemail mailbox and their is no message waiting indication. As with Copy, their is no mailbox synchronization between the e-mail and voicemail mailboxes. Users can also select this mode by dialing ***01*** from their extension.
  - **UMS Exchange**
    Voicemail Pro 5.0+ supports voicemail e-mail to an Exchange server e-mail account. For users and groups also enabled for UMS Web Services this significantly changes their mailbox operation. The Exchange server inbox is used as their voicemail message store and features such as message waiting indication are set by new messages in that location rather than the voicemail mailbox on the voicemail server. Telephone access to voicemail messages, including Visual Voice access, is redirected to the Exchange server mailbox. See UMS Exchange Server Installation and UMS Exchange.
- **Alert**
  If this mode is selected, each time a new voicemail message is received in the voicemail mailbox, a simple e-mail message is sent to the e-mail address. This is an e-mail message announcing details of the voicemail message but with no copy of the voicemail message attached. Users can also select this mode by dialing ***02*** from their extension.

- **Voicemail On** *Default = On*
  When on, the mailbox is used by the IP Office to answer the user's unanswered calls or calls when the user's extension returns busy. Note that selecting off does not disable use of the user's mailbox. Messages can still be forward to their mailbox and recordings can be placed in it. The mailbox can also still be accessed to collect messages.
- **Voicemail Help** *Default = Off*
  For voicemail systems running IP Office mailbox mode, this option controls whether users retrieving messages are automatically given an additional prompt *"For help at any time press 8."* If switched off, users can still press 8 for help. For voicemail systems running in Intuity emulation mode, this option has no effect. On those systems the default access greeting always includes the prompt *"For help at any time, press *4"* (*H in the US locale).
- **Broadcast**
  Select the option **Broadcast** if you want any voicemail messages left for the hunt group to be forwarded to the mailboxes of the individual group members. The original message in the hunt group mailbox is deleted after being broadcast.
- **UMS Web Service** *(IP Office 5.0+)*
  If selected, the hunt group mailbox can be accessing using UMS via a web browser or an IMAP compatible e-mail application.

4. Click **OK** and save the configuration.

5.6 Voicemail Channel Reservations

By default inbound calls routed from IP Office to voicemail are able to use any available voicemail channels, up to the limit of the number of licensed channels, regardless of how many calls of the same type are already in progress. However, if required, channels can be reserved for different types of inbound calls to the voicemail server.

Voicemail channel reservations can be made for:

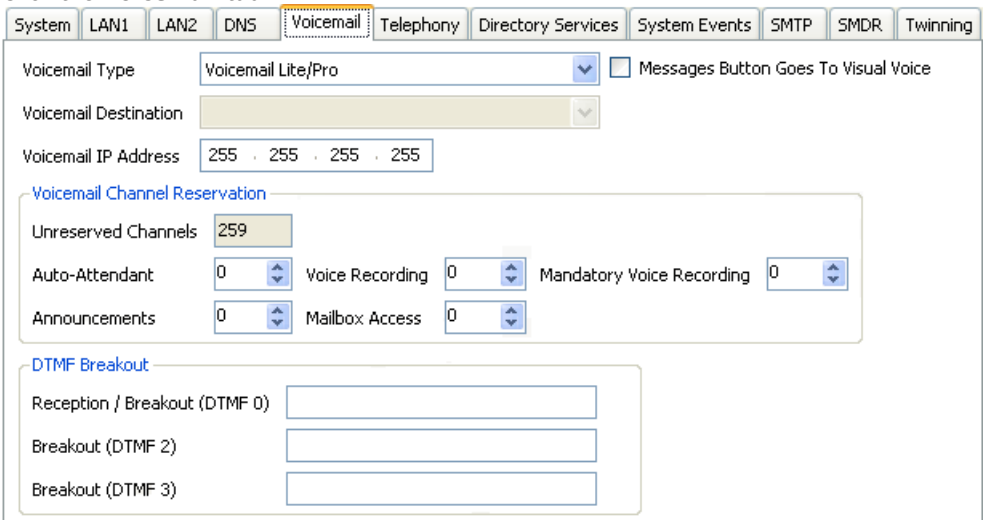
- **Auto Attendant**
- **Announcements**
- **Voice recording**
- **Mailbox access**
- **Mandatory voice recording**

It is worth checking the voicemail channel reservations if there are problems. If insufficient voicemail channels are available:

- Internal calls to an auto attendant are queued. The call will queue until a resource becomes available.
- Announcements are not heard by the caller, but the call is routed correctly.
- Manual voice recording is activated but no recording is made. The call will continue.
- Users are placed in a queue when trying to access their mailbox access.
- A user with mandatory recording on outgoing calls (internal and external) gets a busy tone.
- A call on a line with mandatory recording set will be barred.

To change voicemail channel reservations:

1. Open IP Office Manager and the load the configuration.
2. In the Navigation pane click **System** and select the system.
3. Click the **Voicemail** tab.



4. Amend the channel reservations as required. By default the values are 0.

To view the utilization of voicemail channels:

1. Open the System Status Application.
2. Click **Resources**. The System Resources summary is displayed. The following details are displayed:
   - The number of voicemail channels available.
   - The number of channels in use.
   - Congestion information

Channel Restrictions

- The Voicemail Pro server has restrictions on the number of channels it can use for different types of outgoing calls that it can make. These limits are separate for each of the call types. When a limit is reached, further calls of that type are delayed until one of the existing calls is completed. These limitations are not controlled by Voicemail Channel Reservation 63 settings.
  - Outcalling can use up to 5 channels at any time.
  - Conference center invitation calls can use up to 5 channels at any time.
  - Callback calls can use up to 2 channels at any time.
  - Alarm calls can use up to 2 channels at any time.

Chapter 6.
System Preferences

6. System Preferences

A range of voicemail server settings can be set through the Voicemail Pro client.

To change the Voicemail Pro Preferences

1. Click the **Preferences** icon and then choose **General** or **VPNM**. Alternatively, from the **Administration** menu, select **Preferences** and then choose **General** or **VPNM**.
2. Select the System Preferences tab required.
    - **General** 67
      General voicemail server settings.
    - **Directories** 68
      Set the folder paths for different file locations.
    - **Housekeeping** 74
      Set the times for automatic deletion of different types of messages. Also set the default playback order.
    - **E-mail** 69
      Select the e-mail mode (MAPI or SMTP) used by the voicemail server for its e-mail functions and configure various settings for the selected mode.
    - **SNMP Alarm** 75
      Set the criteria which will cause the voicemail server to send alarms via the IP Office.
    - **Outcalling** 77
      Set the default times for outcalling operation and the frequency of outcalling retires.
    - **VPNM**
      If VPNM is installed and licensed, this tab is available to set the locations of the remote VPNM servers and the mailbox users on those servers.

6.1 General

Although the default IP Office configuration settings support voicemail to start operating almost immediately, as soon as a voicemail server is running on the LAN, there are some general system preferences that you can set or change.

To set up general system preferences:

1. Display the main Voicemail Pro window.
2. From the **Administration** menu, select **Preferences** > **General**.

- **Debug Level:** *Default = Information*
  Set the level of information that the server should output for logging if required.
  Note: If you are using Voicemail Pro installed on Unified Communications Module, see Default Logging Level on UC Module Voicemail Pro 16.
- **Default Telephony Interface:** *Default = Intuity*
  Select the mailbox operation mode for all mailboxes. The options are ***IP Office*** mode or ***Intuity*** emulation mode.
- **Voicemail Password:** *Default = Blank*
  A voicemail password is optional for the voicemail server is optional. If you set a password here, it must match the Voicemail Password configured within the IP Office's security settings. See Identifying the Voicemail Server Computer 56.
- **Client/Server Connection Timeout (mins):** *Default =5 minutes.*
  The voicemail server supports only one Voicemail Pro client to be connected at a time. This timeout logs out an inactive client, stopping it from preventing another client from connecting.
- **Min. Message Length (secs):** *Default = 3 seconds.*
  By default the minimum message length is 3 seconds in IP Office mailbox mode, 0 seconds in Intuity emulation mode. Use this field to set the minimum length between 0 and 10 seconds. Messages under this length are deleted immediately.
- **Max. Message Length (secs):** *Default = 120 seconds.*
  This value sets the maximum length for messages. The default message length is 120 seconds. The maximum message length is 3600 seconds (60 minutes). 1 minute equals approximately 1MB of disk space.
- **Max. Call\VRL Record Length (secs):** *Default =3600 seconds.*
  This value sets the maximum recording time for recorded calls. The default and maximum length is 3600 seconds (60 minutes).
- **Play Advice on Call Recording:** *Default = On*
  If selected, an advice warning is played whenever call recording is started advising the callers that their call is being recorded. This may be a legal requirement in some countries and so should not be disabled without checking first.
- **System Fax Number:** *Default = Blank*
  This field can be used to set the number of the fax machine to which all incoming faxes should be directed. If a fax board is being used, this number must match the number of the extension that is connected to the fax board of the fax server computer.
  - Intuity mailbox owners have the additional option to define their own personal fax number instead of the system fax number. As the system administrator, you still need to set a system fax number to enable mailbox owners to override it with their preferred personal fax number. Incoming calls are directed to Voicemail Pro and then Voicemail Pro redirects fax calls to the mailbox owner's personal fax number, if one has been set. For details, mailbox owners can refer *Avaya IP Office Intuity Mailbox Mode User Guide* (15-601130).
  - If your fax system requires prefix addressing, for example the C3000 fax server, do not type a fax number in the **System Fax Number** box. Instead type the number to use as a prefix so that a fax message can be identified and forwarded to the extension number of the intended recipient. For example, if the prefix were 55, a fax message for extension 201 would have the prefix of 55 automatically added so that the complete number would become 55201.
- **System Fax Number**
  By default fax detection is not enabled when Voicemail Pro is first installed. When fax detection is enabled, any fax calls that are left in a voicemail mailbox, are redirected to this system fax number.
  - **Use as a Prefix**
    If your fax system does not use prefix addressing, leave this box unchecked. For this feature to work, you also need to set up a short code.
  - **Enable Fax Sub-Addressing**
    Most fax servers perform fax forwarding based on DTMF signaling received with the fax call. Check the **Enable Fax Sub-Addressing** box so that the DTMF signal is passed to the fax server after the call has been answered so that the fax can be forwarded to the e-mail address of the intended recipient.

3. Click **OK**.
4. Click **Save and Make Live** and select **Yes**.

6.2 Directories

When Voicemail Pro is installed some default folder locations are used. You can change these if required.

To set the location of Voicemail system folders:

1. Display the main Voicemail Pro window.
2. From the **Administration** menu, select **Preferences** > **General**.
3. Click the **Directories** tab.
   - **Voicemail Server Directory**
     The path to the folder where the voicemail server program is to be stored. This is the folder where the file ***Root.vmp*** is saved when the **Save & Make Live** option is used.
   - **Voicemail Server Speech Directory**
     The path to the folder where the libraries of speech prompts are to be stored.
   - **Remote Campaign Directory**
     The path to the folder where the campaign files are to be stored.
4. Click **OK**.
5. Click  **Save and Make Live** and select **Yes**.

6.3 Email

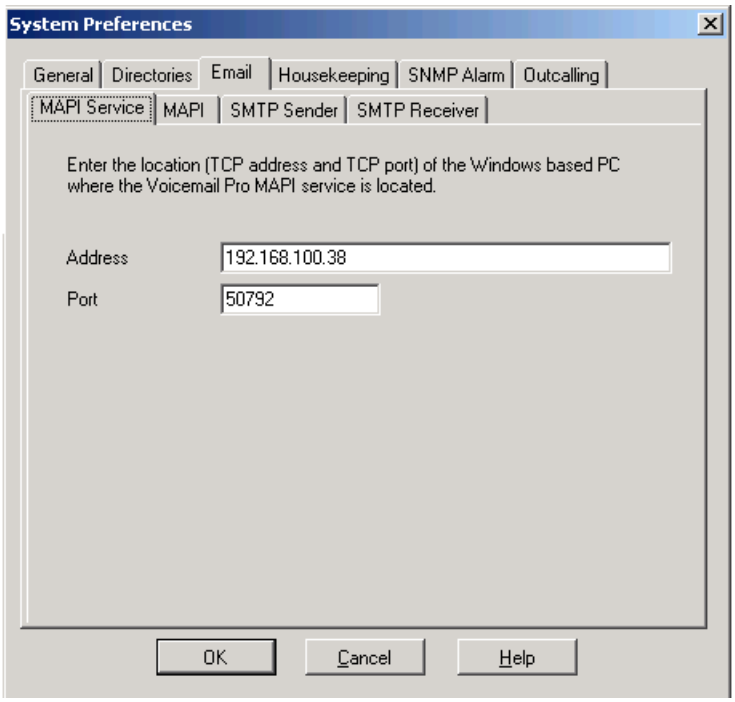
The **Email** tab is used to configure which e-mail mode (MAPI or SMTP) the voicemail server should use and the settings for that mode.

6.3.1 MAPI

This form is used to configure MAPI settings for use by the voicemail server.

MAPI Service

Use this tab to configure the IP address and port of the MAPI proxy service.



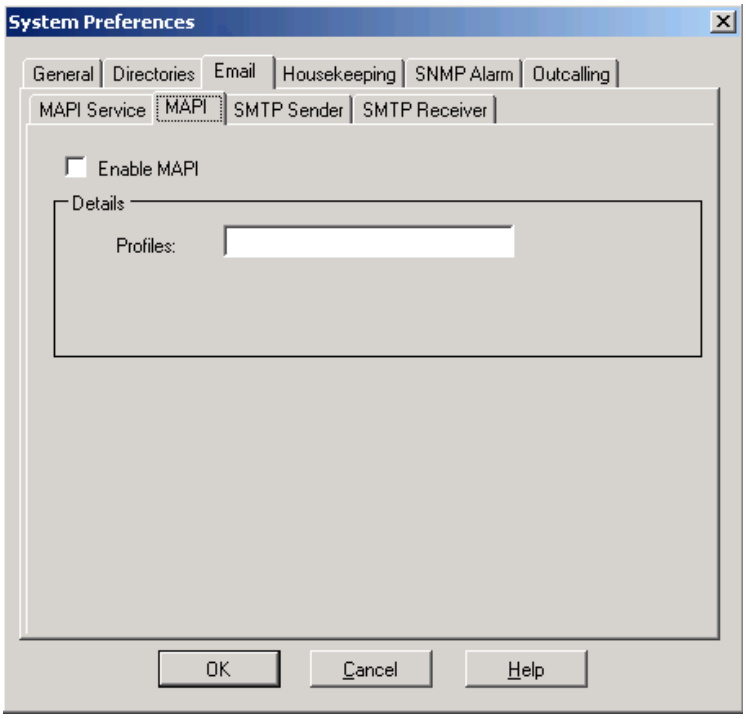
- **Address**

  This text box is used to enter the TCP address of the Windows-based computer where MAPI Service is installed.

- **Port**

  This text box is used to enter the default **50792** TCP Port of the Windows-based computer where MAPI Service is installed.

MAPI



- **Enable MAPI**
  Selecting this option will switch the voicemail server to using MAPI for its e-mail options rather than SMTP.
- **Profile**
  This is used to select the MAPI e-mail account the voicemail server should use to provide visibility to the e-mail account mailboxes for which it requires access. The profile must exist within the MAPI e-mail client on the server computer and must be useable by the Windows account under which the Voicemail Pro service is running.

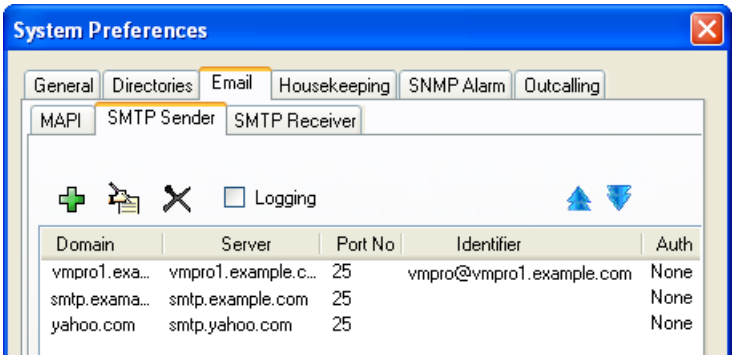
6.3.2 SMTP Sender

These settings are used to configure the SMTP server and server account that the voicemail server uses for sending e-mails using SMTP.

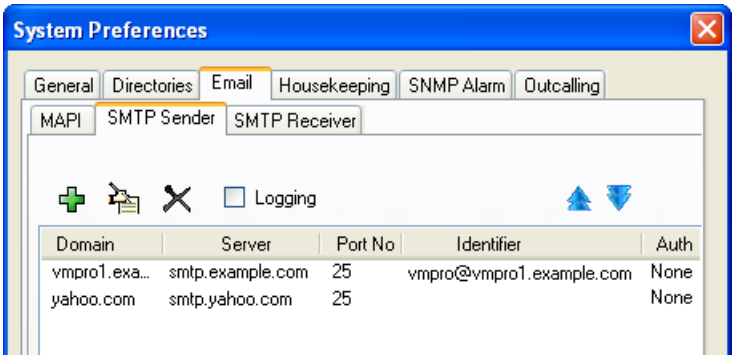
Multiple servers can be configured. The first entry specifies the default SMTP server used for sending e-mails if there is no other entry matching the domain specified in the e-mail destination address. Additional servers can be added when different settings are required for sending e-mails to specific domains. For example, the default can be configured for the customer's internal network exchange server with additional entries added for e-mails to external e-mail domain addresses such as yahoo.com.

- **Messaging Between Voicemail Servers**
  VPNM, distributed voicemail servers and primary/backup voicemail servers all use SMTP to exchange information and messages between the voicemail servers. When that is the case the first entry in the **SMTP Sender** list must be the one used and needs to be configured for that service with the domain and server setting both matching the IP address or fully qualified domain of the voicemail server.

In the example below, the first entry is being used for messages to other voicemail servers. Its own address is used as both the domain and server settings as an SMTP service on the same server as the voicemail service is used (eg. IIS SMTP on the Windows server). The next entry is used for other e-mails that use the customer's general e-mail domain address with the server set to the customers e-mail server. A third entry has been added to send some e-mails generated by E-mail Actions in call flows direct to an external e-mail service.



- The first two entries in the example above can be combined. Voicemail server to server synchronization uses the **Domain** setting only whereas other e-mail services use the **Server** address and other setting.

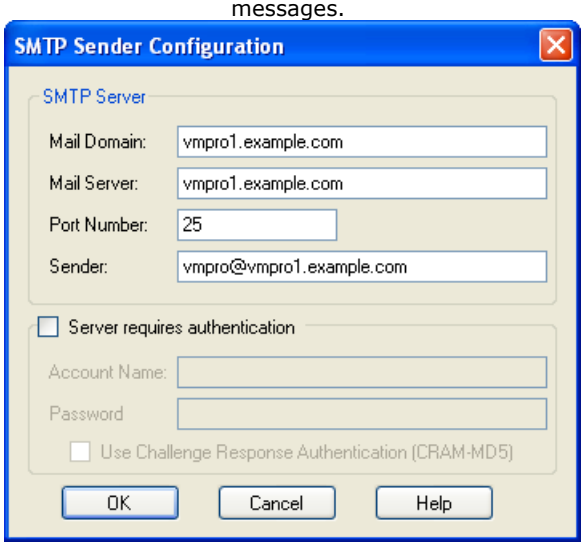


SMTP Sender Settings

- **Logging**
  If selected, SMTP logging 96 by the server is enabled.

- **Servers**

This section is used to enter details of the SMTP server or servers to which the voicemail server send its messages.



To add a server, click on the . icon. To edit the server, click on the icon. To delete a server entry, click on .

- **Mail Domain**
  This field is used differently depending on whether it is the first entry in the list or not:
  - **For the first server entry in the list:**
    This is the default outgoing e-mail settings. It also sets the mail destination domain on which the voicemail server filters incoming messages (see below) and so is repeated on the **SMTP Receiver** 74 tab.
    - **Messaging Between Voicemail Servers**
      For messaging between voicemail servers, the first entry in the SMTP Sender list must be the one configured and used. Each server uses the SMTP server service on the same server computer as the voicemail service. For example a Windows based servers uses the SMTP e-mail provided by the IIS on the same server. The voicemail service also uses the domain set to filter incoming SMTP mails received by the SMTP server. For this to work, the domain entered should be the fully qualified name of the server on which the voicemail server is running, for example ***vmpro1.example.com***. Any incoming messages where the recipient mail domain is not exactly the same as the specified domain are ignored. The recipient can either by ***vmsyncmaster***, ***vmsyncslave*** or the name or extension of a mailbox on the Voicemail Pro server, for example ***Extn201@vmprocentral.example.com*** or ***201@vmprocentral.example.com***.
  - **For subsequent entries:**
    The domain specifies that these settings should be used for e-mails sent to the matching domain. The entry must be a fully qualified name resolvable by DNS or an IP address.
- **Server**
  This specifies the IP address or fully qualified domain name of the SMTP server to which messages are sent.
- **For the first server entry in the list:**
  Where messaging between voicemail servers is being used (central, backup and or distributed servers), the first entry is used and will match the domain set above.
- **For subsequent entries:**
  It will be the address of the e-mail server that will handle e-mails for recipients other than another voicemail server on the network.
- **Port Number**
  This is port to which messages are sent, usually 25.
- **Sender** (**Identifier**)
  Note that some servers will only accept e-mails from a specific sender or sender domain. If left blank, the voicemail server will insert a sender using either the e-mail address set for the voice mailbox user if set or otherwise using the best matching name it can resolve from the IP Office.
- **Server Requires Authentication**
  This check box indicates whether the connection to send SMTP messages to the mail server requires authentication with that server. The authentication will typically be to the name and password of a mailbox account configured on that server.
  - **Account Name**
    Sets the name to use for authentication.
  - **Password**
    Set the password to use for authentication.
  - **User Challenge Response Authentication (Cram MD5)**
    If this check box is selected, the name and password are sent using Cram MD5.

6.3.3 SMTP Receiver

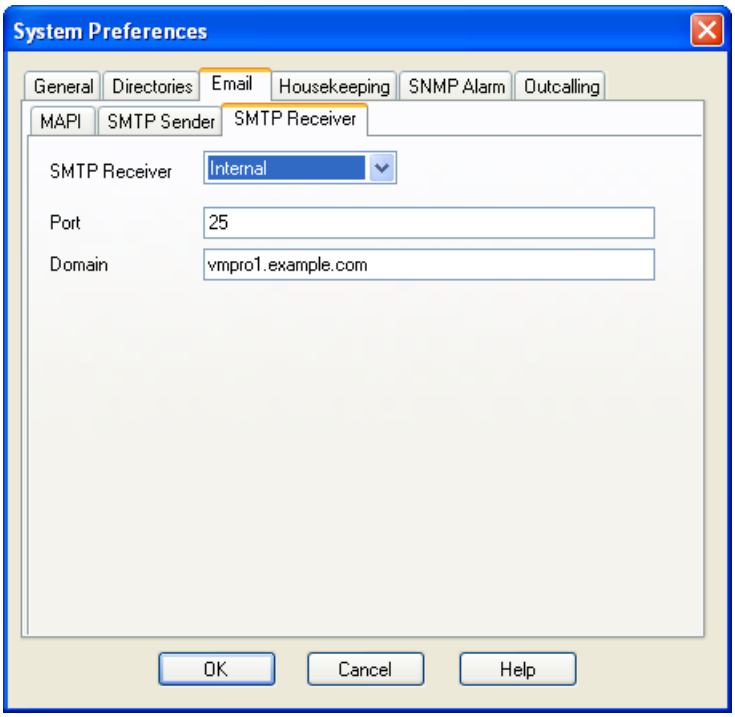
This tab is used to set where the voicemail server checks for incoming SMTP messages. The **SMTP Receiver** setting can be set to either ***Internal*** or ***External***.

- **Internal** 74
  Use this option for voicemail servers running on the IP Office Application Server server.
- **External** 74
  Use this option when the voicemail server is on a server where is co-exists with a third-party SMTP application, for example an IIS server with SMTP enabled.

Internal

The Internal setting can be used when the voicemail server should check the appropriate account on an SMTP server for waiting messages. The server settings will be pre-populated using the entries from the **SMTP Sender** 70 form.

- **Distributed/Primary/Backup Voicemail**
  This is the option that should be used when the voicemail server is a IP Office Application Server (Linux) based server in a network distributed voicemail servers are being used or is a server in a primary/backup voicemail server pairing.



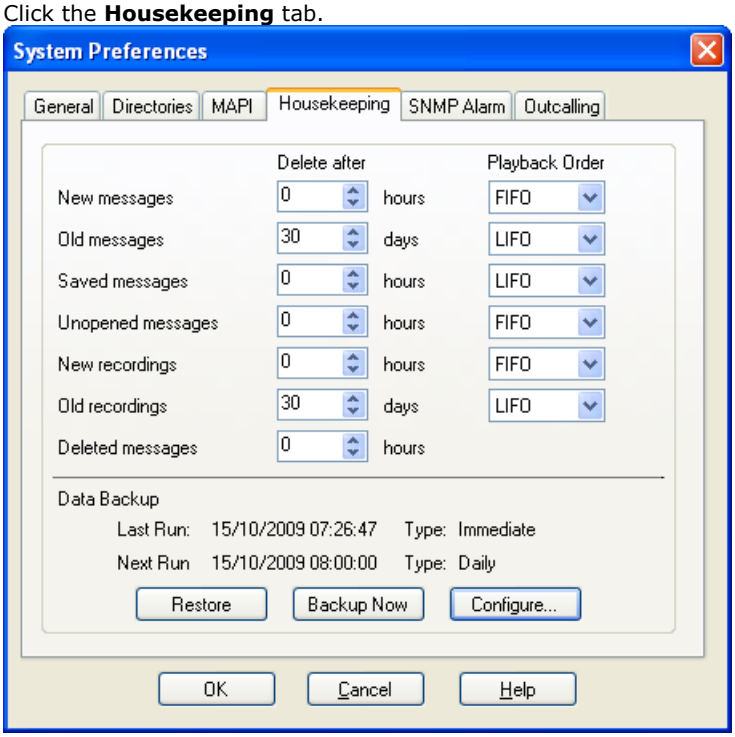
- **Port**
  This is the port on which the Voicemail Pro server listens for incoming messages. The default is 25.
- **Domain**
  This is the domain destination address for which the server will accept incoming e-mails. Note that it matches the domain set by the first server entry in the **SMTP Sender** 70 tab.
  - **Messaging Between Voicemail Servers**
    For messaging between voicemail servers, the first entry in the SMTP Sender list must be the one configured and used. Each server uses the SMTP server service on the same server computer as the voicemail service. For example a Windows based servers uses the SMTP e-mail provided by the IIS on the same server. The voicemail service also uses the domain set to filter incoming SMTP mails received by the SMTP server. For this to work, the domain entered should be the fully qualified name of the server on which the voicemail server is running, for example ***vmpro1.example.com***. Any incoming messages where the recipient mail domain is not exactly the same as the specified domain are ignored. The recipient can either by ***vmsyncmaster***, ***vmsyncslave*** or the name or extension of a mailbox on the Voicemail Pro server, for example ***Extn201@vmprocentral.example.com*** or ***201@vmprocentral.example.com***.

6.4 Housekeeping

This tab is used to set the Voicemail Pro server settings for automatically deleting messages and for the default playback order of messages. For Voicemail Pro 6.0+ it is also used to access options for backing up and restoring voicemail messages and settings.

The voicemail servers housekeeping settings can be used to configure how long messages and recording are retained before the server will automatically delete them. The playback order for different types of messages can also be set. Note that the housekeeping deletion settings are not applicable for messages stored on the Exchange server.

1. From the **Administration** menu, select **Preferences** > **General**.
2. Click the **Housekeeping** tab.



3. **Delete after**
   Sets the time, in hours, after which messages of various types automatically deleted. A value of ***0*** disables automatic deletion. The actual deletion is performed during the next idle period during which there are no calls to or from the voicemail server.
4. **Playback Order**
   Sets the order of playback used for different message types. The options are first in-first out (***FIFO***) and last in-first out (***LIFO***). ***FIFO*** is the default.
   - The different message status types are:
     - **New**
       This status is applied to messages where neither the header or the message content has been played.
     - **Old**
       This status is applied to messages where the user has played the message content but has not marked the message as saved.
     - **Saved**
       This status is applied to messages that have been marked as saved by the user.
     - **Unopened**
       This status is used for messages where, in Intuity emulation mode, the user has played the message header but has not played the message content.
     - **New Recordings**
       This status is used for recordings that have not been played.
     - **Old Recordings**
       This status is used for recordings that have been played.
     - **Deleted Messages**
       This status is used for messages that have been marked as deleted through mailbox access.
5. Click **OK**.
6. Click **Save and Make Live** and select **Yes**.

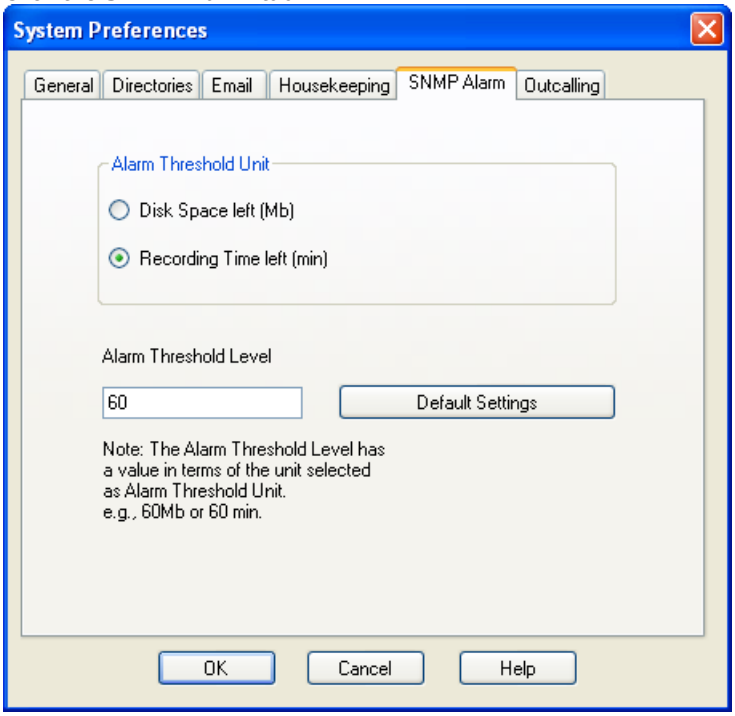
6.5 SNMP Alarm

The IP Office system can be configured to send alarms. These alarms can be sent from the IP Office using SNMP, SMTP e-mail or Syslog alarm formats. This tab is used to sets the levels at which the voicemail server will indicate to the IP Office to send an alarm.

To set up disk space and recording time alarms:

1. Display the main Voicemail Pro window.
2. From the **Administration** menu, select **Preferences** > **General**.

3. Click the **SNMP Alarm** tab.



4. Choose the **Alarm Threshold Unit** either **Disk Space Left (MB)** or **Recording Time left (minutes)**.
5. In the **Alarm Threshold Level** box, type the number of units (minutes or MB) left at which SNMP alarms are to be triggered. The minimum is 11. This value also sets two further SNMP alarm levels which are:
   - **Space OK Alarm**
     This alarm is triggered when the amount of available space returns to above a level set at *Alarm Threshold Level plus 30*.
   - **Critical Alarm**
     This alarm is set at 30 or, when the Alarm Threshold Level is less than 40, at *Alarm Threshold Level minus 10*. Currently the critical alarm value will decrease in accordance with the above rule. Note however that it does not increment upwards when the Alarm Threshold is increased again. To reset the critical alarm back to 30, click **Default Settings**.
6. To return to the default alarm settings, click **Default Settings**. The Alarm Threshold Level is reset to 60. The Space OK level is reset to 90. The Critical Alarm level is reset to 30.
7. Click **OK**.
8. Click **Save and Make Live** and select **Yes**.

6.6 Outcalling

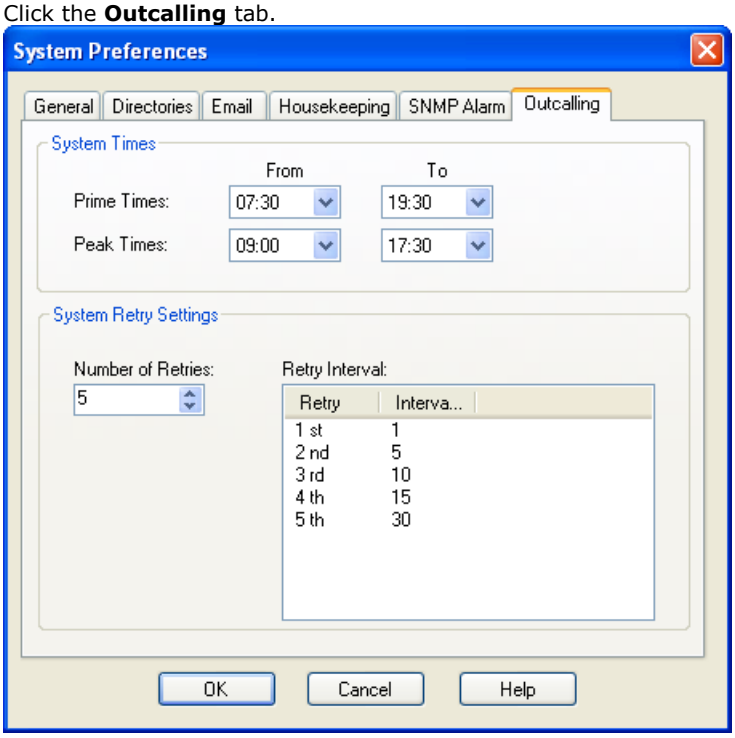
The outcalling preferences in Voicemail Pro are defaults for global operation. Mailbox owners can configure their own outcalling options from their telephone, for example, create their own time profile.

For details on configuring outcalling, refer *Avaya IP Office Intuity Mailbox Mode User Guide* (15-601130) and *Avaya IP Office Phone Manager User Guide* (15-600988).

A timeout value can also be set by a user. This is the duration for which outcalling will attempt to connect to a number before giving up.

To set the global outcalling preferences:

1. Display the main Voicemail Pro window.
2. From the **Administration** menu, select **Preferences** > **General**.
3. Click the **Outcalling** tab.



4. Select the times that outcalling is active in the **System Times** section.
   - **Prime Times**
     The time period that outcalling is to be active as default for the system.
   - **Peak Times**
     The busiest working hours.
5. Set the retry settings in the **System Retry Settings** section.
6. The **Number of Retries** can be between 0 and 10. If the message is not collected after the last retry, no notification is sent until another new message is delivered in the user's mailbox.
7. The **Retry Interval** for each successive retry. The interval is the length of time between each attempt to connect to the target number again. The 6th to 10th retries use the default retry interval.
8. Double-click a selected retry time to edit the interval between retries. The New interval number window opens where the length of time between each attempt to ring the target number can be changed. Click **OK** to save the change and return to the Outcalling window.
9. Click **OK**.
10. Click **Save and Make Live** and select **Yes**.

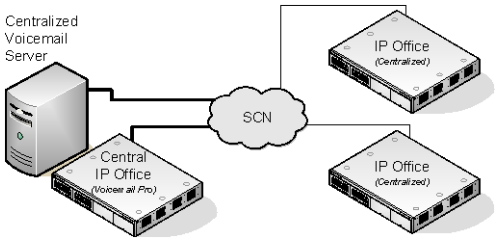
Chapter 7.
Centralized Voicemail Pro

7. Centralized Voicemail Pro

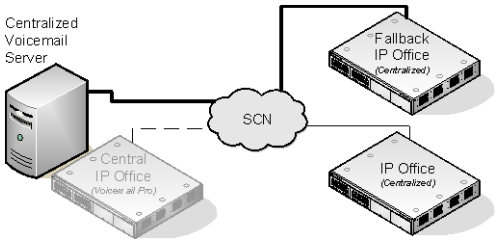
A Small Community Network (SCN) consists of several IP Office telephone systems. These are connected using **H323 Lines** where the **Supplementary Services** settings of the lines has been set to ***IP Office SCN***. For details, refer to *Avaya IP Office Manager* (15-601011).

Within a Small Community Network, the following options for providing voicemail are supported:

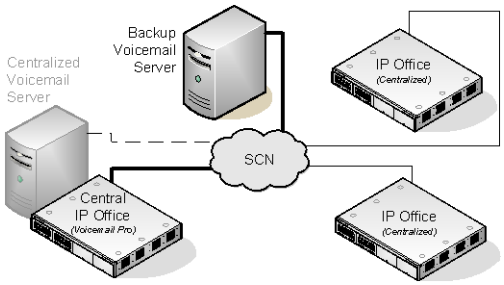
- **Centralized Voicemail** 81
  Centralized Voicemail Pro uses a single Voicemail Pro server to provide voicemail services for all IP Offices in the Small Community Network. Except for use of ContactStore, only the central IP Office hosting the voicemail server requires licensing for Voicemail Pro operation and features.
  - **Licenses:** The central IP Office is licensed as normal for Voicemail Pro operation and the voicemail features required. The other IP Offices only require licenses for UMS and or for ContactStore if required.



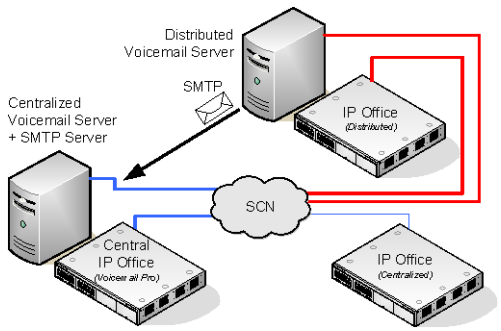
- **Centralized Voicemail with Fallback IP Office** 82
  Control of the voicemail server can be taken over by another IP Office if the central IP Office becomes unavailable.
  - IP Office Release 5.0+ with Voicemail Pro 5.0+.
  - **Licenses:** The fallback IP Office that takes over control of the voicemail server requires licenses for Voicemail Pro operation and the features required during fallback.



- **Centralized Voicemail with a Backup Voicemail Server** 83
  The central IP Office hosting the voicemail server can be configured with the IP address of a backup voicemail server. During normal operation, call flows and other settings on the backup server are kept synchronized with those of the primary voicemail server. If the primary voicemail server becomes unavailable to the network, voicemail services are provided by the backup voicemail server.
  - IP Office Release 6.0+ with Voicemail Pro 6.0+.
  - IIS SMTP is used to exchange information between the servers.
  - **Licenses:** The existing licenses are used.



- **Centralized Voicemail with Distributed Voicemail Servers** 85
  Other IP Offices in the Small Community Network can host their own Voicemail Pro server. That server is then used for the IP Office's voicemail functions except message storage.
  - IP Office Release 6.0+ with Voicemail Pro 6.0+.
  - IIS SMTP is used to exchange information between the servers.
  - The distributed voicemail server provides all voicemail services except voicemail collection for its associated IP Office.
  - **Licenses:** Each IP Office using a distributed voicemail server must have licenses for Voicemail Pro operation and the voicemail features required.

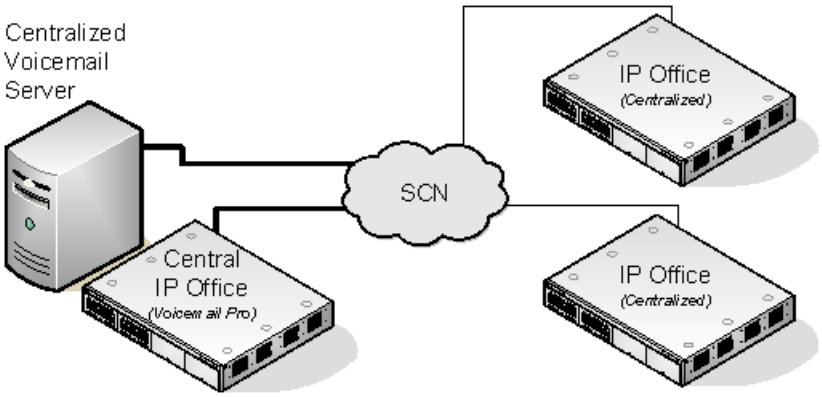


In all the cases above, the central voicemail server remains the store for messages and recordings (except for Exchange UMS users). The central voicemail server does message waiting indication and is the voicemail server used for message collection. Only when the central server is temporarily unavailable will the backup or any distributed server do message storage and collection. In those scenarios, when the central server is restored, messages collected by the backup or distributed servers are forwarded to the central server.

Combinations 87 of the solutions above can be deployed. For example using a backup server and fallback IP Office control.

7.1 Centralized Voicemail

Within a Small Community Network, a single Voicemail Pro server can be used to provide voicemail features for all the IP Offices in the SCN.



One IP Office is configured for operation with the Voicemail Pro server as normal, including the license for voicemail operation and the features required. This IP Office is then regarded as the central IP Office for voicemail.

Within the other IP Office systems, the voicemail settings are configured to indicate that they get their voicemail services from the central IP Office. These IP Offices do not need licenses for voicemail (except for ContactStore and or UMS if required).

With the International Time Zone functionality available on the central Voicemail Pro server, the users of the IP offices located in different time zones across the globe receive messages in their voicemail system with their respective time stamp. In the sample scenario, the three IP Offices located in different time zones connect to each other. Two of the IP Offices are located in different geographical locations and are connected to the central IP Office. The Voicemail Pro server connects to the central IP Office. In this setup, the system stores the voicemail messages on the centralized Voicemail Pro. Each IP Office is set up to use Simple Network Time Protocol (SNTP) .

In the centralized Voicemail Pro setup, the time source of the IP Office network must be SNTP (Simple Network Time Protocol).

Simple Network Time Protocol (SNTP) is an Internet standard protocol (built on top of TCP/IP) that provides accurate synchronization to the millisecond of computer clock times in a network of computers. It synchronizes all the IP Offices in an SCN configuration.

Summary of IP Office Settings

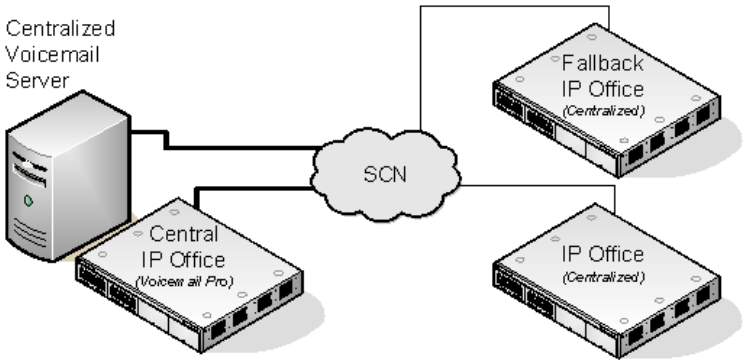
Once the IP Office SCN has been setup, the following settings are used in the IP Office systems to provide voicemail operation for all the IP Offices.

IP Office Settings	Central IP Office	Other IP Offices
Voicemail Type	***Voicemail Pro***	***Centralized Voicemail***
Voicemail IP Address	Set to the voicemail server computer's IP address.	*Not used.*
Voicemail Destination	*Not used.*	Set to the **Outgoing Group ID** of the H323 Line to the central IP Office.
Licenses	This system needs licenses 12 for all the Voicemail Pro features required.	The other IP Offices only require licenses for UMS and or for ContactStore if required.

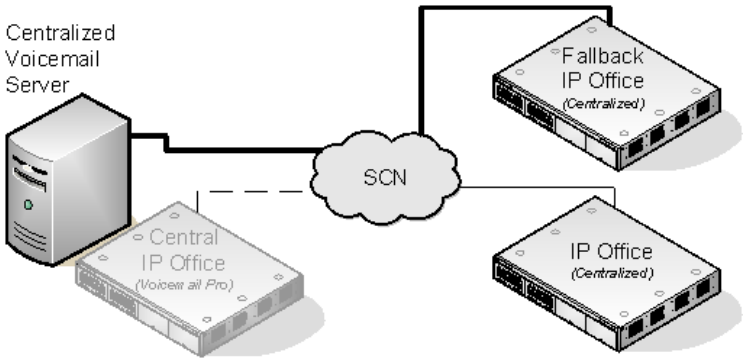
When accessing a voicemail server that is acting as centralized voicemail server, the Voicemail Pro will display **Centralized Voicemail** in the title bar.

7.2 Fallback IP Office Control

IP Office Release 5.0+ supports a number of fallback features for Small Community Networks. In conjunction with Voicemail Pro 5.0+, fallback can include one of the IP Offices assuming control of the voicemail server should the central IP Office become unavailable on the network.



Normal Operation
During normal operation, voicemail services for the Small Community Network are provided by the central IP Office communicating with the voicemail server.



Fallback Control Operation
If the central IP Office becomes unavailable to the network, control of voicemail services for the Small Community Network is taken over by the fallback IP Office.

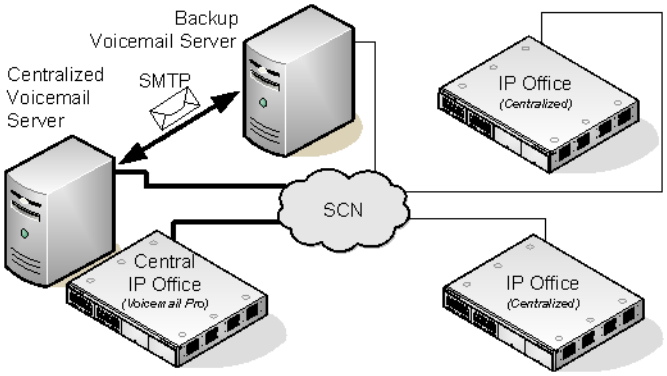
- **WARNING**
  During the transition of voicemail control, access to voicemail may be unavailable for several minutes. Existing voicemail calls are disconnected and new calls are routed as if voicemail is unavailable. The same applies when the central IP Office is restored.

Setup and Requirements for Voicemail Fallback

- Within the configuration of the central IP Office hosting the voicemail server, on the H323 Line to the fallback IP Office;
  - The **Supplementary Services** setting should be changed from ***IP Office - SCN*** to ***IP Office -SCN Fallback***.
  - The option ***Backs up my Voicemail*** should then be selected from the **SCN Backup Options**.
- The fallback IP Office is configured for centralized voicemail as normal. However its configuration must also include licenses for the Voicemail Pro support and the voicemail features required during fallback.

7.3 Backup Voicemail Server Operation

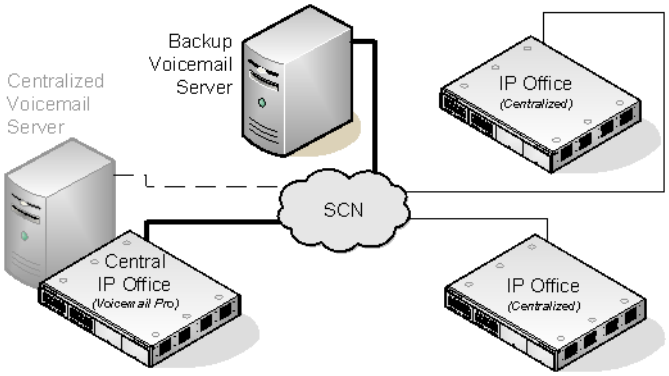
For IP Office Release 6.0 and higher, the central IP Office hosting the Voicemail Pro server can be configured with the IP address of a backup voicemail server. If the central voicemail server becomes unavailable to the network, the backup server will be used to provide voicemail services. This option requires the voicemail servers to be running Voicemail Pro 6.0 or higher.



Centralized voicemail with a backup server during normal operation.

During Normal Operation:

- Voicemail services and message storage for the IP Offices is provided by the primary voicemail server.
- Call flows and other settings configured on the backup voicemail server are synchronized with those of the central voicemail server.
- Messages are synchronized but the central voicemail server remains the message store accessed for message collection.
- The synchronization is done using IIS SMTP e-mail between the servers.



Centralized voicemail with a backup server during backup operation.

During Backup Operation:
If the central voicemail server become unavailable to the network:

- The backup voicemail server provides voicemail services for the IP Offices.
- New messages are left on the backup server.

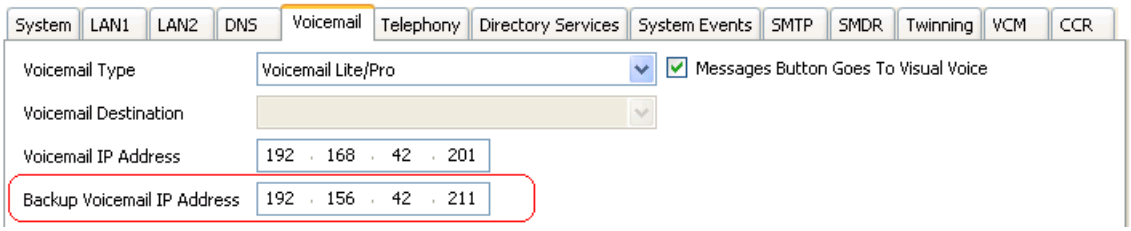
After Backup Operation
When the central server is restored to the network:

- It does not automatically resume control. However messages and changes that occurred while it was unavailable are synchronized from the backup server.
- If the backup server fails, the central sever resumes control as the active server.

- Call flows defined on the central server are synchronized with the backup server.
- Call flows defined on the central server cannot be modified on the backup server.
- Call flows cannot be defined on the backup server.
- Call flows defined on a distributed server are not synchronized to the central or backup servers.

Configuring Backup Server Operation

1. The Voicemail Pro server software is installed as normal on the backup server computer. The voicemail server is not specifically configured as being a backup server.
2. The central IP Office hosting the primary voicemail server is configured with the IP addresses of both the primary voicemail server and the backup voicemail server.

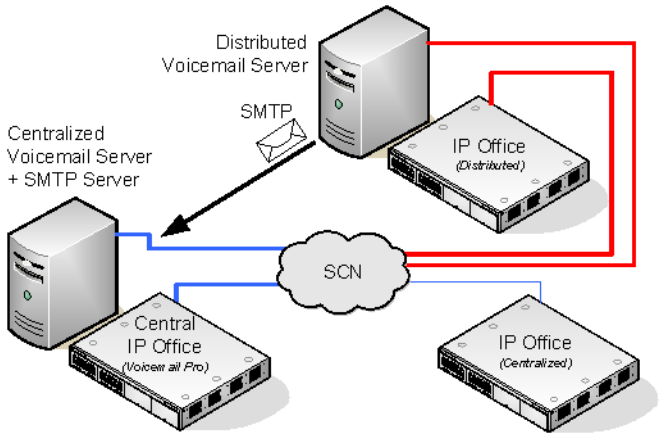


3. The other IP Offices are configured for centralized or distributed voicemail as normal.

7.4 Distributed Voicemail Servers

For IP Office Release 6.0 and higher, remote IP Offices in the Small Community Network can be associated with another voicemail server in addition to the centralized voicemail server. The additional distributed server then provides all voicemail services (except message storage and collection) for that IP Office. This requires the remote IP Office to have licenses for voicemail operation and the features it requires.

While the distributed server does message recording, it forwards all messages to the central voicemail server. The messages are transferred between systems using an IIS SMTP e-mail services. For mailbox users, message waiting indication and message collection is still done using the central voicemail server. With the support of International Time Zone (ITZ) functionality, the users of the IP Offices located across the globe receive messages in their voicemail system with their respective local time stamp.



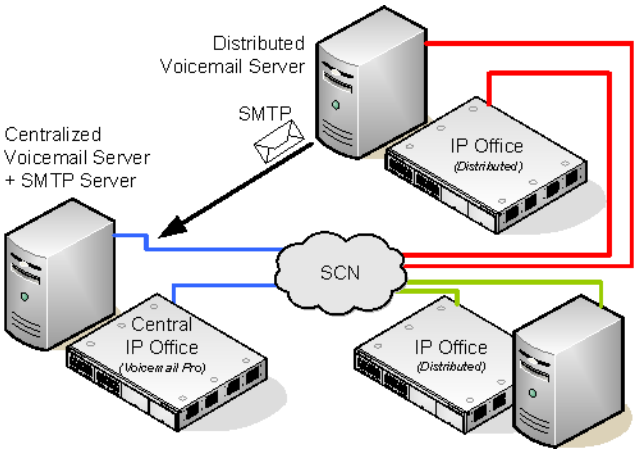
Centralized Voicemail with Additional Distributed Voicemail Servers

In this scenario, the three IP Offices located in different time zones connect to each other. Two of the IP Offices are located in different geographical locations and are connected to the Central IP Office. The Central IP Office connects to a central Voicemail Pro server and the other IP Offices connect to the Distributed Voicemail Pro server, an additional voicemail server added to the Small Community Network. Each IP Office is set up to use Simple Network Time Protocol (SNTP), the time source of the IP Office Network.

Simple Network Time Protocol (SNTP) is an Internet standard protocol (built on top of TCP/IP) that provides accurate synchronization to the millisecond of computer clock times in a network of computers. It synchronizes all the IP Offices in an SCN configuration.

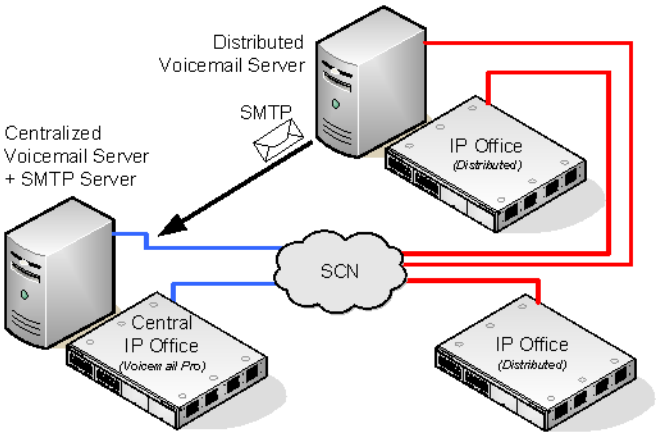
- Other IP Offices continue to use centralized voicemail as normal.
- An IP Office that is using a distributed voicemail server cannot also be used as the fallback IP Office 82 for the central voicemail server.
- The synchronization is done using IIS SMTP e-mail between the servers.

Note: In the distributed Voicemail Pro set up, ITZ functions similar to the centralized Voicemail pro set up.



Multiple Distributed Servers

Additional distributed voicemail servers can be added as required by the individual IP Office sites in the Small Community Network.



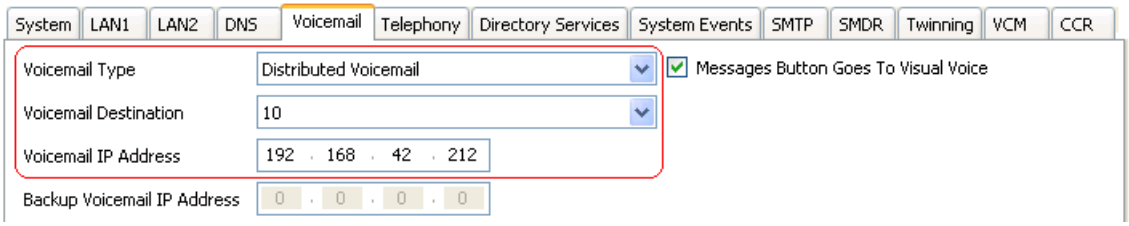
Sharing Distributed Voicemail Servers
The same distributed voicemail server can be shared by several IP Offices. The services it provided to each will depend on the licenses that each has.

Summary of IP Office Configuration Settings for Distributed Voicemail Severs

IP Office Settings	Central IP Office	Other IP Offices	IP Office with Distributed Server
Voicemail Type	***Voicemail Pro***	***Centralized Voicemail***	***Distributed Voicemail***
Voicemail IP Address	Set to the central voicemail server computer's IP address.	*Not used.*	Set to the distributed voicemail server computer's IP address.
Voicemail Destination	*Not used.*	Set to the **Outgoing Group ID** of the H323 Line to the central IP Office.	Set to the **Outgoing Group ID** of the H323 Line to the central IP Office.
Licenses	This system needs licenses for Voicemail Pro and all voicemail features required.	The other IP Offices only require licenses for UMS and or for ContactStore if required.	This system needs licenses for Voicemail Pro and all voicemail features required.

Configuring Distributed Voicemail Server Operation

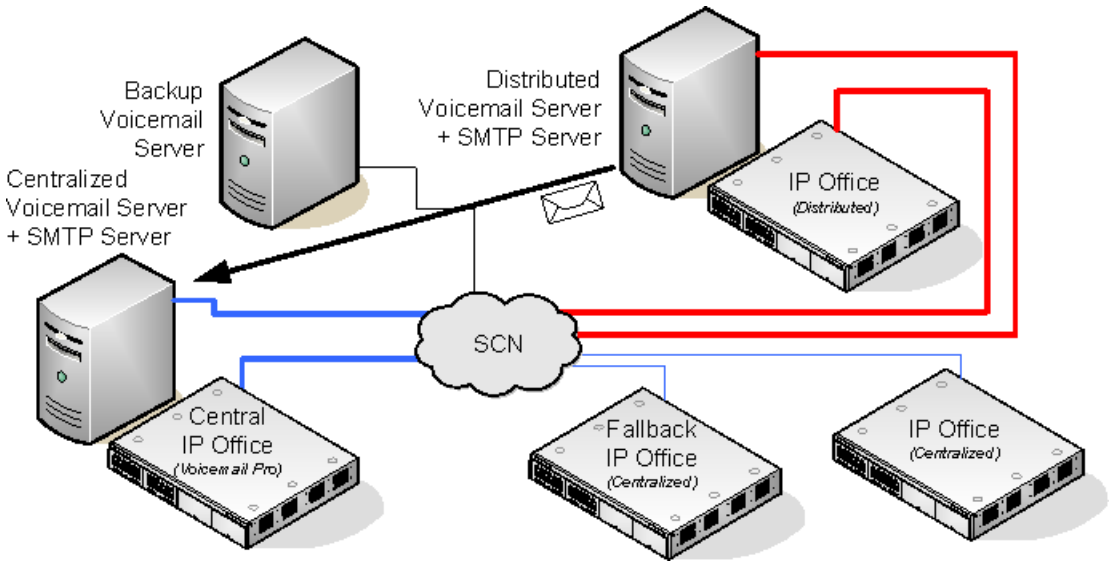
1. The centralized voicemail server for the SCN and its central IP Office are configured as normal.
2. The Voicemail Pro server software is installed as normal any distributed voicemail server computer. The distributed voicemail server is not specifically configured as being a distributed server.
3. Each IP Office hosting a distributed voicemail server is configured with the **Voicemail Type** set to ***Distributed Voicemail***.



- The **Voicemail Destination** is set the ***Outgoing Group ID*** of the H323 trunk to the central IP Office hosting the centralized voicemail server.
- The **Voicemail IP Address** is set to the IP address of the computer running the distributed voicemail server for the IP Office.

7.5 Combined Options

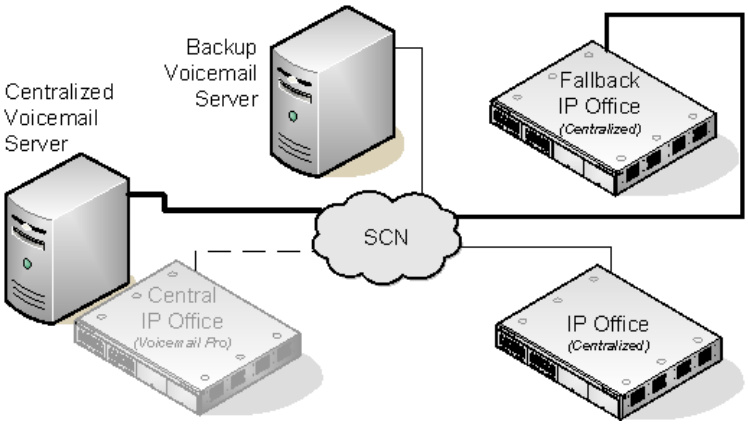
The various centralized voicemail options (standard, fallback, backup and distributed) can be used within the same Small Community Network.



- An IP Office using a distributed voicemail cannot be used as the fallback IP Office for the central IP Office.
- A distributed voicemail server cannot also be used as the backup voicemail server.

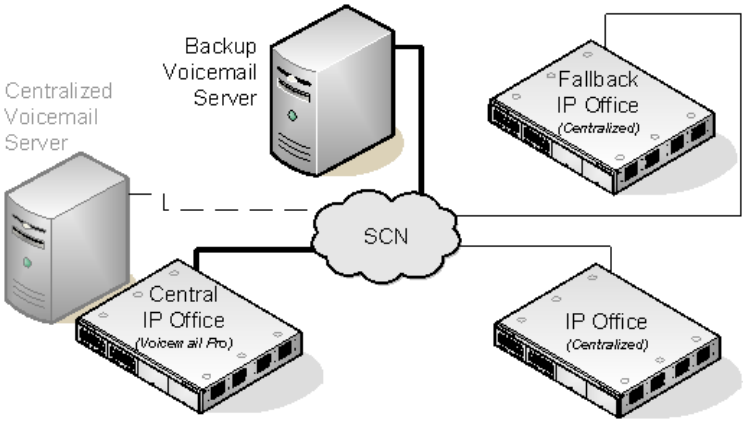
Example: Combined Fallback Control and Backup Server Operation

In the example below the fallback IP Office control [82] and backup voicemail server [83] operation can be combined.



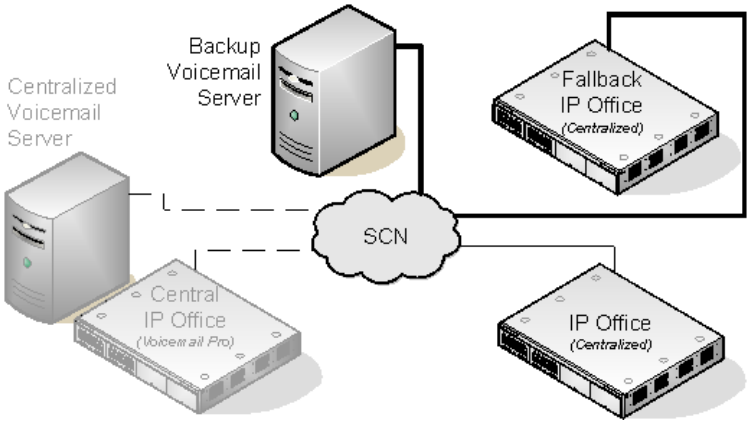
Central Voicemail Server controlled by Fallback IP Office

- **Central IP Office Unavailable**
  If the central IP Office becomes unavailable on the network, the fallback IP Office takes over control of voicemail services using the centralized voicemail server.



Backup Voicemail Server controlled by Central IP Office

- **Central Voicemail Unavailable**
  If the central voicemail server becomes unavailable on the network, the central IP Office will switch to using the backup voicemail server.



Combined Backup Voicemail Server and Fallback IP Office Operation

- **Central IP Office and Central Voicemail Server Unavailable**
  If both the central IP Office and the central voicemail server become unavailable to the network, voicemail services will switch to the backup voicemail server under control of the fallback IP Office.

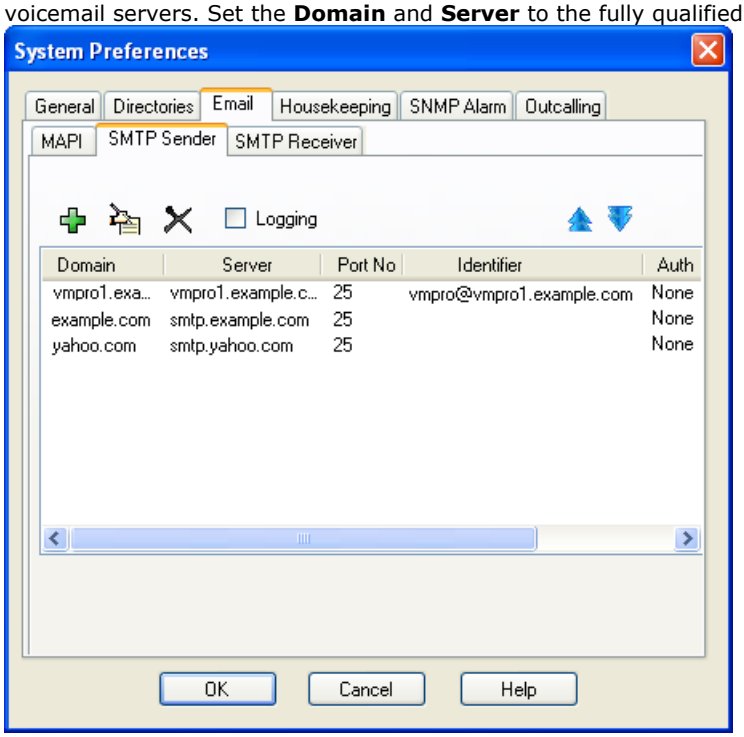
7.6 Installation Notes

SMTP Configuration

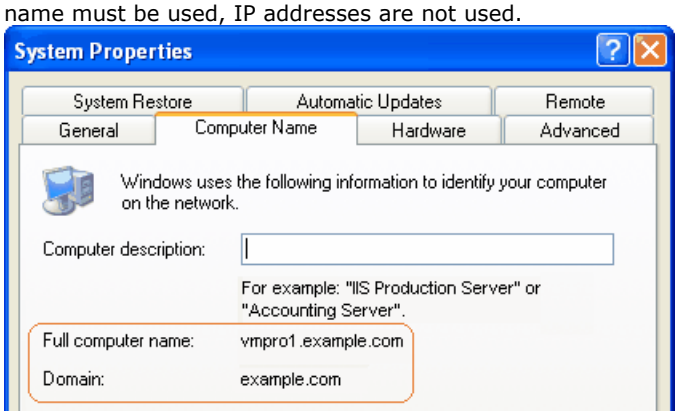
Both the distributed voicemail and backup voicemail scenarios use the same mechanism for the information exchange between the servers. That mechanism uses SMTP e-mails between the IIS on each of the voicemail servers. Note that this means a server with Microsoft Exchange installed (such as an SBS server) cannot be used as Exchange replaces the IIS SMTP service.

The following notes apply to both scenarios unless specifically stated as otherwise.

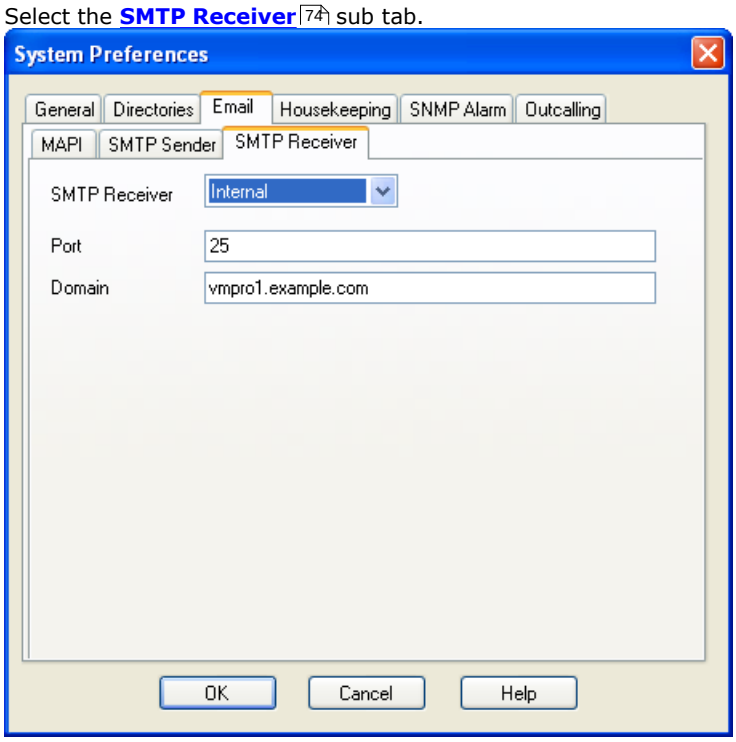
1. **Install and Enable IIS**
   All the voicemail servers (central, distributed and backup) require IIS to be installed and enabled on the server before installation of the Voicemail Pro server software.
   1. Start the **Internet Information Services** manager.
   2. Right-click on the **Default SMTP Virtual Server** and select **Properties**.
   3. Select the **Messages** tab. Deselect the **Limit Message Size** and **Limit number of messages per connection** options.
2. **Configure Each Voicemail Pro Server for SMTP E-mail via IIS**
   Following installation of the Voicemail Pro server software, its should be configured for SMTP e-mail operation as follows:
   a. By default the Voicemail Pro server installs defaulted to SMTP e-mail operation. However this should be checked.
      1. Start the Voicemail Pro Client. Click **Preferences** and select **General**.
      2. Click the **E-mail** tab.
      3. Verify that the **MAPI** settings are not enabled. .
      4. Select the **SMTP Sender** sub tab. The first entry in the list must be configured for SMTP between the voicemail servers. Set the **Domain** and **Server** to the fully qualified domain name of the voicemail server.



- For a Windows based voicemail server, these e-mails will be received on port 25 by IIS and will be placed in its mail drop folder. To obtain the name, right-click on **My Computer** and select **Properties**. The **Computer Name** tab shows the information that should be used as **Full computer name**. The name must be used, IP addresses are not used.



5. Select the **SMTP Receiver** sub tab.



- For a Windows based server, set the **SMTP Receiver** as ***External*** and set the **Drop Folder** address to be the IIS mail drop folder (usually ***C:\Inetpub\mailroot\Drop***). For a Linux based server set the **SMTP Receiver** as ***Internal***.
- Click **OK**.

6. Click **Save & Make Live**.

3. **Verify that Port 25 is Not Blocked**
   Many firewalls block access to port 25 by default. Check that the firewall software on the server is configured to include ***VMProV5Svc.exe*** as an exception.

4. **DNS Host Routing *(Optional)***
   SMTP operation uses fully qualified domain names that need to be resolved to IP addresses by the network's DNS server. For name resolution, the hosts files on each server can be used. Note however that if this method is used, any changes to IP addresses of servers will need to be reflected in the file update. Locate the file ***C:\Windows\System32\drivers\etc\hosts*** and open it in a text editor such as WordPad. Add IP address and fully qualified domain name entries for each of the other voicemailservers.

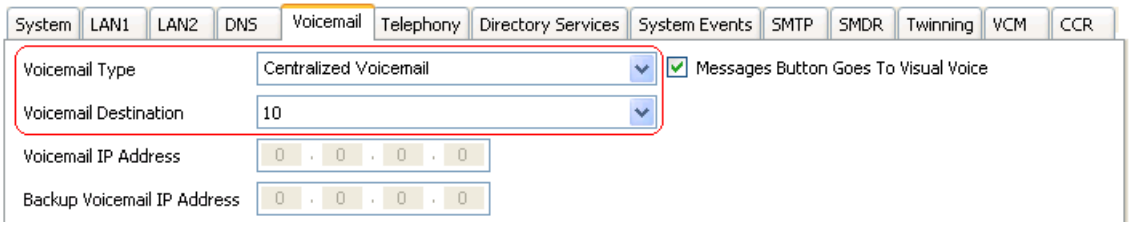
Voicemail Pro Configuration

In all scenarios, each Voicemail Pro server should use the same basic configuration settings, ie. the same voicemail mode (Intuity or IP Office) and the same housekeeping settings.

IP Office Configuration

Configuring Distributed Voicemail Server Operation

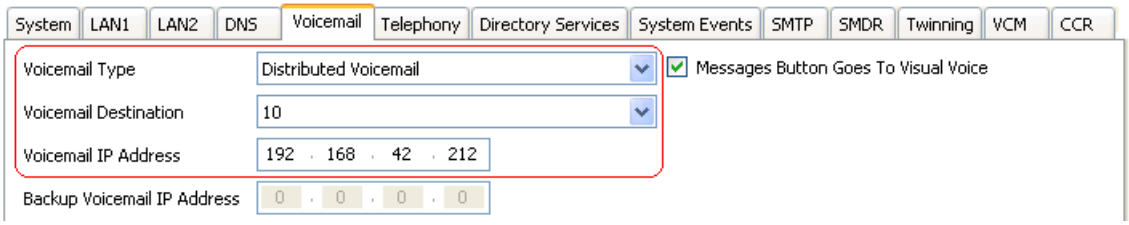
1. The centralized voicemail server for the SCN and its central IP Office are configured as normal.
2. Each IP Office not hosting a distributed voicemail server is configured with the **Voicemail Type** set to ***Centralized Voicemail***.



- The **Voicemail Destination** is set the ***Outgoing Group ID*** of the H323 trunk to the central IP Office hosting the centralized voicemail server.

Configuring Distributed Voicemail Server Operation

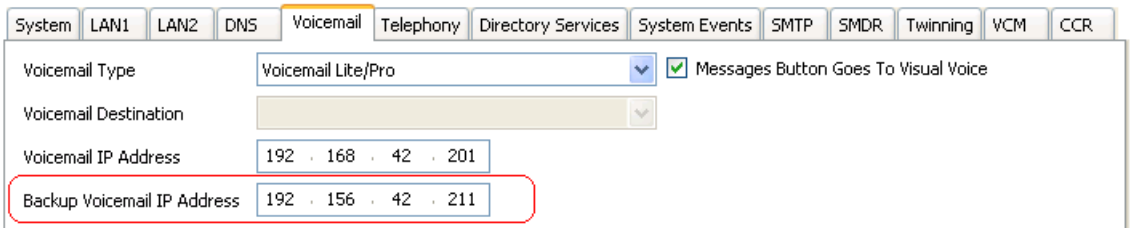
1. The centralized voicemail server for the SCN and its central IP Office are configured as normal.
2. The Voicemail Pro server software is installed as normal any distributed voicemail server computer. The distributed voicemail server is not specifically configured as being a distributed server.
3. Each IP Office hosting a distributed voicemail server is configured with the **Voicemail Type** set to ***Distributed Voicemail***.



- The **Voicemail Destination** is set the ***Outgoing Group ID*** of the H323 trunk to the central IP Office hosting the centralized voicemail server.
- The **Voicemail IP Address** is set to the IP address of the computer running the distributed voicemail server for the IP Office.

Configuring Backup Server Operation

1. The Voicemail Pro server software is installed as normal on the backup server computer. The voicemail server is not specifically configured as being a backup server.
2. The central IP Office hosting the primary voicemail server is configured with the IP addresses of both the primary voicemail server and the backup voicemail server.



3. The other IP Offices are configured for centralized or distributed voicemail as normal.

Check the Server Connections

1. **Check Connection to the Central Server**
   In the following tests, remember to use the fully qualified domain name of each server.

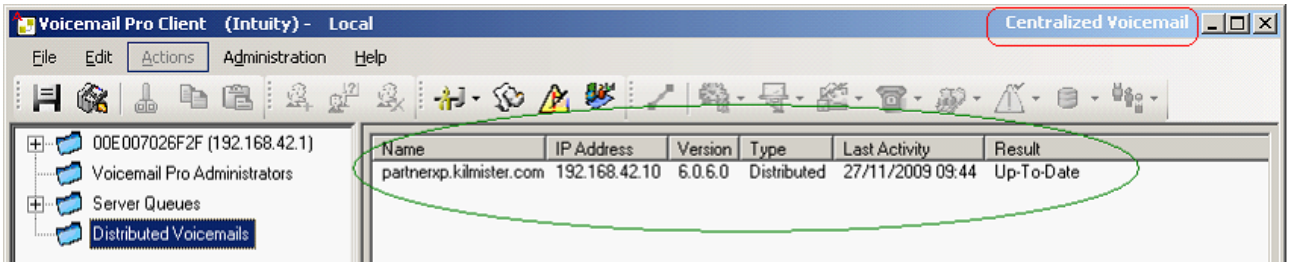
   a. **Ping Test**
   Make a ping from the server to the central server, for example ***ping vmpro1.example.com***. You should see a series of 4 successful replies from the sever.

   b. **Telnet Test**
   Make a telnet test from the server to the central server, for example ***telnet vmpro1.example.com 25***. You should receive a response from the e-mail server within IIS. Enter ***quit*** to close the telnet connection.

2. **Check Connection from the Central Server**
   Repeat the ping and telnet tests, this time from the central server to the backup or distributed server.

Checking Status with the Voicemail Pro Client

When connected to a Voicemail Pro server using the Voicemail Pro client, the client title bar will display the role of that voicemail server; ***Centralized Voicemail***, ***Backup Voicemail*** or ***Distributed Voicemail***.



When connected to the backup voicemail server, if it is the active server, the title will have changed from ***Backup Voicemail*** to ***Backup Voicemail (Live)***.

When connected to the centralized voicemail server, the **Distributed Voicemails** folder can be selected to display details of the distributed servers and the state of the connection with each. The **Result** will be either:

- **In Progress**
  The servers are synchronizing information via SMTP.
- **Up-To-Date**
  The servers are synchronized.

Chapter 8.
Appendix

8. Appendix

8.1 SMTP Logging

SMTP error logging is enabled to generate a log of SMTP activity.

For a Windows based Voicemail Pro installation, the activity is logged in a file in **C:\Program Files\Avaya\IP Office\Voicemail Pro\VM\logs**. The file name includes a date stamp for the day on which it is generated. For a Linux based server the log files can be archived and downloaded using the web control menus.

8.2 Glossary

8.2.1 Centralized Voicemail Pro Server

Centralized Voicemail Pro uses a single Voicemail Pro server to provide voicemail services for all IP Offices in the Small Community Network. Except for use of ContactStore, only the central IP Office hosting the voicemail server requires licensing for Voicemail Pro operation and features.

8.2.2 Distributed Voicemail Pro Server

For IP Office Release 6.0 and higher, remote IP Offices in the Small Community Network can be associated with another voicemail server in addition to the centralized voicemail server. The additional distributed server then provides all voicemail services (except message storage and collection) for that IP Office. This requires the remote IP Office to have licenses for voicemail operation and the features it requires.

8.2.3 MAPI

Message Application Programming Interface (MAPI) is a Microsoft Windows system architecture that supports adding messaging functionality into applications. MAPI-enabled e-mail applications can share e-mails and also work together to distribute the mail.

8.2.4 SNTP

Simple Network Time Protocol (SNTP) is an Internet standard protocol (built on top of TCP/IP) that provides accurate synchronization to the millisecond of computer clock times in a network of computers. It synchronizes all the IP Offices in an SCN configuration.

8.2.5 VPNM

Voicemail Private Networked Messaging (VPNM) is a set of preferences available only if you have selected VPNM during installation and is licensed within the IP Office configuration. It is used to add a list of the remote VPNM servers and mailbox users on those servers.

8.2.6 VRL

Using the Voice Recording Library (VRL) operation, Voicemail Pro can transfer specific users' automatic and/or manually recorded calls to a third-party application. Users can select VRL as the destination for calls recorded via a Leave Mail action in a call flow.

Currently, this mode of operation is only supported with the Contact Store for IP Office application from Witness Systems. This application provides tools to sort, search and playback recordings. It also supports the archiving of recordings to DVD.

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