



IP Office

IP Office Application Server Installation and Maintenance

Notices

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

Documentation disclaimer

Avaya shall not be responsible for any modifications, additions, or deletions to the original published version of this documentation unless such modifications, additions, or deletions were performed by Avaya.

End User agree to indemnify and hold harmless Avaya, Avaya's agents, servants and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation, to the extent made by End User.

Link disclaimer

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

Warranty

Avaya provides a limited warranty on this product. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya's standard warranty language, as well as information regarding support for this product, while under warranty, is available to Avaya customers and other parties through the Avaya Support Web site: <http://www.avaya.com/support>. Please note that if you acquired the product from an authorized Avaya reseller outside of the United States and Canada, the warranty is provided to you by said Avaya reseller and not by Avaya.

Licenses

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

Avaya grants End User a license within the scope of the license types described below. The applicable number of licenses and units of capacity for which the license is granted will be one (1), unless a different number of licenses or units of capacity is specified in the Documentation or other materials available to End User. "Designated Processor" means a single stand-alone computing device. "Server" means a Designated Processor that hosts a software application to be accessed by multiple users. "Software" means the computer programs in object code, originally licensed by Avaya and ultimately utilized by End User, whether as stand-alone products or pre-installed on Hardware. "Hardware" means the standard hardware originally sold by Avaya and ultimately utilized by End User.

License types

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

Copyright

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

Third Party Components

Certain software programs or portions thereof included in the Product may contain software distributed under third party agreements ("Third Party Components"), which may contain terms that expand or limit rights to use certain portions of the Product ("Third Party Terms"). Information regarding distributed Linux OS source code (for those Products that have distributed the Linux OS source code), and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply to them is available on the Avaya Support Web site: <http://support.avaya.com/Copyright>.

Preventing toll fraud

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

Avaya fraud intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, call Technical Service Center Toll Fraud Intervention Hotline at +1-800-643-2353 for the United States and Canada. For additional support telephone numbers, see the Avaya Support Web site: <http://support.avaya.com>. Suspected security vulnerabilities with Avaya products should be reported to Avaya by sending mail to: securityalerts@avaya.com.

Trademarks

Avaya and Aura are trademarks of Avaya, Inc. The trademarks, logos and service marks ("Marks") displayed in this site, the documentation(s) and product(s) provided by Avaya are the registered or unregistered Marks of Avaya, its affiliates, or other third parties. Users are not permitted to use such Marks without prior written consent from Avaya or such third party which may own the Mark. Nothing contained in this site, the documentation(s) and product(s) should be construed as granting, by implication, estoppel, or otherwise, any license or right in and to the Marks without the express written permission of Avaya or the applicable third party. Avaya is a registered trademark of Avaya Inc. All non-Avaya trademarks are the property of their respective owners.

Downloading documents

For the most current versions of documentation, see the Avaya Support Web site: <http://www.avaya.com/support>

Contact Avaya Support

Avaya provides a telephone number for you to use to report problems or to ask questions about your product. The support telephone number is 1-800-242-2121 in the United States. For additional support telephone numbers, see the Avaya Web site: <http://www.avaya.com/support>

Contents

1. The IP Office Application Server

1.1 Using Linux	8
1.2 Server PC Requirements.....	8
1.3 Installation Requirements.....	9
1.4 Software	9
1.5 Installation.....	10
1.6 Logging In	14
1.7 Checking the Services.....	15
1.8 one-X Portal for IP Office Configuration.....	16
1.9 Voicemail Pro Configuration.....	20

2. Server Configuration

2.1 Logging In	23
2.2 Change the Web Password.....	24
2.3 Starting/Stopping Application Services.....	25
2.4 Server Shutdown.....	26
2.5 Rebooting the Server.....	26
2.6 Changing the IP Address Settings.....	27
2.7 Checking the DHCP Address.....	28
2.8 Date and Time Settings.....	29
2.9 Upgrading Applications.....	30
2.10 Uninstalling an Application	31
2.11 File Repositories.....	32
2.11.1 Source Files.....	32
2.11.2 Setting the Repository Locations.....	32
2.11.3 Uploading Local Files.....	33
2.11.4 Creating Remote Software Repositories.....	34

3. Server Menus

3.1 Home	37
3.2 Logs	38
3.2.1 View.....	38
3.2.2 Download.....	39
3.3 Updates	40
3.3.1 Services.....	41
3.3.2 System.....	42
3.4 Settings	43
3.4.1 General.....	43
3.4.2 System.....	46
3.5 Windows Clients.....	48

4. Additional Processes

4.1 Changing the Root Password.....	50
4.2 SSH File Transfers.....	51
4.3 Command Line.....	52
4.3.1 General Commands.....	53
4.3.2 Administrator Commands.....	55
4.3.3 Configuration Commands.....	56
4.4 Windows to Linux Voicemail Transfer.....	57
Index	59

Chapter 1.

The IP Office Application Server

1. The IP Office Application Server

The IP Office Application Server is a single installer for selected IP Office applications running on Linux. The Linux operating system is included as part of the installation. It requires minimal Linux knowledge due to the inclusion of a web based management interface to allow the server to be managed remotely via web browser. However, experienced Linux System Administrators can extend the value of the solution by installing additional general purpose business applications. Any additional applications installed should be compatible with the base CentOS 5.5 32 bit Linux operating system.

The IP Office Application Server installation installs the base operating system, the IP Office server applications and web pages for managing the server.

- **one-X Portal for IP Office**
This is a web browser application that user's can use to control making and answering calls on their phone. It also provides a range of gadget for the user to access features such as their directory, call log and voicemail messages. The one-X Portal for IP Office application is configured and managed remotely using web browser access.
- **Voicemail Pro**
This is a voicemail messaging application. It provides mailbox services to all users and hunt groups on the IP Office switch for which it is configured. In addition it can be highly customized to provide a range of call routing and voicemail services. The Voicemail Pro application is configured and managed remotely using the Windows Voicemail Pro client. A copy of the Voicemail Pro client can be [downloaded](#)^[48] and installed from the IP Office Application Server.
- **Web Control**
The IP Office Application Server server is configured and managed remotely using web browser access.
- **Linux**
The base operating system installed is CentOS 5, a Linux operating system. However, no specific knowledge of Linux is required for installation and or maintenance of the server.

When installing additional applications care should be taken to ensure that the resource usage of these applications is understood and that the performance of the Avaya applications is not compromised beyond acceptable levels. Also any ports used by the new applications should not conflict with those used by the Avaya Applications. Avaya will regularly issue security patches and it is the responsibility of the installer to ensure that their applications are compatible with those patches.

Voicemail Pro Features

For Voicemail Pro server running on the IP Office Application Server, the following Voicemail Pro features are not supported:

- VB Scripting.
- TTS Text to Speech.
- MAPI Email.
- UMS Exchange Integration.
- ContactStore.
- 3rd Party Database Integration.
- VPNM.
- UMS Web Voicemail
However access via IMAP and one-X Portal for IP Office are available as alternatives.

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

The Voicemail Pro client's backup and restore functions cannot currently be used to move voicemail data between a Linux based server and a Windows based server or vice versa. The client functions for importing and exporting module and the call flow database can be used.

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 allowed.

Linux is a registered trademark owned by Linus Torvalds.

1.1 Using Linux

Despite using a Linux based operating system, knowledge or experience of Linux by the installer and maintainer is not required. The IP Office Application Server is designed to be configured and maintained remotely using its web browser interface.

No access to the Linux command line is used except for changing the [root user password](#)^[50]. Using the Linux command line to perform any other actions may cause unexpected operation of the IP Office Application Server and is not supported by Avaya except when specifically instructed by Avaya.

1.2 Server PC Requirements

The following are the minimum server PC requirements.

- **IMPORTANT: Compatible Servers**

The compatibility of any particular server PC for the operating system cannot be guaranteed. It is the installers responsibility to ensure that the server platform is compatible with CentOS 5 (<http://www.centos.org>). A list of tested servers is available at <https://hardware.redhat.com/>. The servers used by Avaya for product testing were:

- HP ProLiant DL160
- Dell Optiplex 780MT

	Minimum Specification	Recommended Specification
Processor	Intel Dual Core 2.4GHz	Intel Pentium Quad Core 2.4GHz or AMD Athlon 64 4000 or equivalent.
RAM Memory	2GB	4GB
Hard Disk Space	30GB	30GB

- **Operating System**

The IP Office Application Server installation installs its own operating system (CentOS Linux), replacing any existing operating system on the PC. If an OS free PC cannot be obtained, Linux based PCs are typically cheaper than equivalent Windows based PCs.

- **Drives**

DVD Drive or other bootable source for operating system installation.

- **Other Requirements:**

- The server PC must be configurable to boot from DVD or another external source in order to overwrite any existing OS. This may require access to the BIOS in order to change the boot order if the PC is supplied with an operating system already installed.
- The IP Office Application Server is intended to operate as a headless server, i.e without requiring any keyboard, video and mouse (KVM) connections after initial installation. All configuration and user access is done remotely from other PCs.

1.3 Installation Requirements

The following information and material is required during the installation process:

- **Server Applications**
 During the installation process, you can select which IP Office server applications are installed. Note that for each application selected, the normal IP Office license requirements still apply. Refer to the separate installation manual for each application for details.
 - **Voicemail Pro**
 If selected, the same information is required as for a Windows based installation of the Voicemail Pro server. Refer to the IP Office Voicemail Pro Installation and Maintenance manual.
 - **one-X Portal for IP Office**
 If selected, the same information is required as for a Windows based installation of the one-X Portal for IP Office application. For example, IP address of IP Office system, LDAP server information and voicemail server address (if other than the IP Office Application Server address). Refer to the one-X Portal for IP Office Installation manual.
- **Server IP Address Settings**
 The IP Office Application Server supports IPv4 addressing obtain through either DHCP or static addressing.

	IPv4 Support
Use DHCP	<input type="checkbox"/>
IP Address	<input type="checkbox"/> _____
Prefix (Netmask)	<input type="checkbox"/> _____
Gateway	<input type="checkbox"/> _____
Primary DNS	<input type="checkbox"/> _____
Secondary DNS	<input type="checkbox"/> _____

- **Hostname**
 A hostname helps simplify access to the server and the applications it provides rather than requiring users to use the IP address.
- **Timezone**
 The timezone in which the server is located and whether the server should use UTC or local time.
- **Root Password**
 This password is used for configuration access to the server.
- **Client PC**
 The IP Office Application Server is designed and intended for remote configuration and management. It is not managed directly from the server. Therefore a client PC with a web browser on the same network as the server PC is required for configuration. If Voicemail Pro server is one of the selected server applications, then the client PC must be a Windows based PC onto which the Voicemail Pro client application can be installed.

1.4 Software

The IP Office Application Server software is provided as a DVD set orderable from Avaya. The first DVD is the one referred to by the installation processes in this documentation. The second DVD is a copy of the Open Source Software (OSS) used by the IP Office Application Server as required by the license terms of that OSS software.

For installers and maintainers, access to a program that supports SFTP/SSH, for example SSH Secure Shell, is useful but not obligatory.

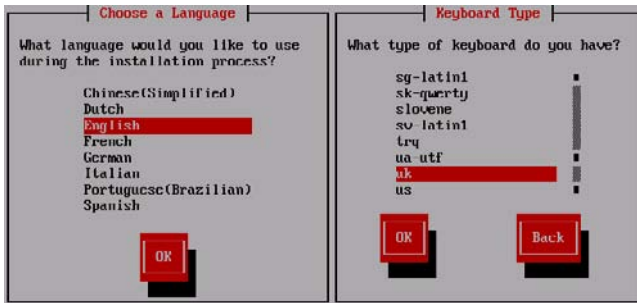
1.5 Installation

Before attempting to install the IP Office Application Server software, ensure that you have met the following requirements:

- [Server PC Requirements](#)
- [Installation Information Requirements](#)
- [Software Requirements](#)

The installation process requires approximately 15 minutes (longer if Test CD/DVD is selected).

1. Insert the DVD into the PCs DVD drive and reboot the PC.
2. The PC should boot from the DVD and the display the IP Office Application Server installation screen.
 - If the PC does not boot from the DVD and instead starts an existing operating system, that indicates that the boot order of the server PC needs to be changed. Follow the PC manufacturers instructions for accessing the PCs BIOS and setting it to boot from DVD before booting from hard disk.
 - If the server PC already has IP Office Application Server installed, options for upgrade, downgrade, reinstall or new install are presented. Note that a new install will reformat the hard disk, removing all existing files.
3. After loading installation software from the DVD, the installation menus will be displayed as follows:



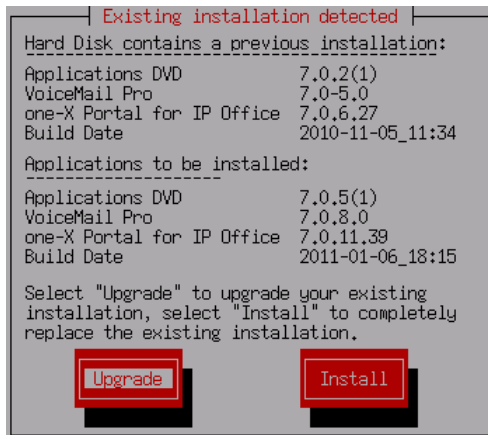
A: Language/Keyboard
These initial steps apply just to the installation process, they do not affect the installed applications. However, they also allow you to familiarize yourself with how the text menus operate.

- Use Tab to move the selector forwards, use Alt-Tab to move it backward. Press Space to select the currently highlighted item.



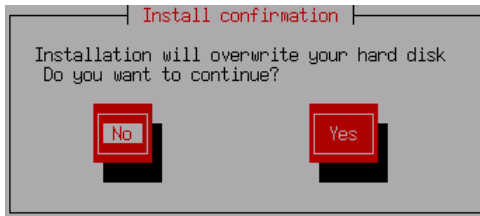
B: Test CD/DVD
If this is the first time that the DVD onto which the IP Office Application Server software has been used, it may be useful to check that the DVD has been written correctly before any changes to the server PC are made. The check process can take up to 30 minutes. If the DVD has already been used successfully for other installations, select Skip to continue.

C. End User License Agreement
Read through the end user license agreement. It is available in several languages, use the Change Language to select the one required. On the last page select I Accept if you want to continue with the installation.



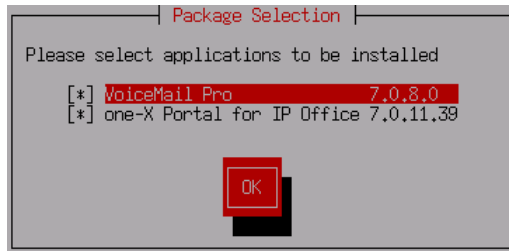
D1: Previous Installation Detected
If IP Office Application Server is already installed on the server, a upgrade menu is displayed, detailing the existing installed options and the new options.

- If Upgrade is selected, the process continues from step J. Preparing to Install.
- If Install is selected, the existing installation is overwritten, continuing as below.



D2: Confirm Installation

If you select No, you will be prompted to remove the DVD from the drive and then reboot the server. Use this option if you do not want to overwrite the existing data on the server.

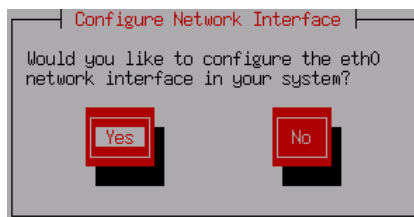


E: IP Office Applications

The IP Office applications available for installation and the version of each are indicated. Select the applications required and then select OK.

F: Ethernet Address Configuration

The next stages will vary slightly depending on whether the server PC has a single network interface or multiple network interfaces.

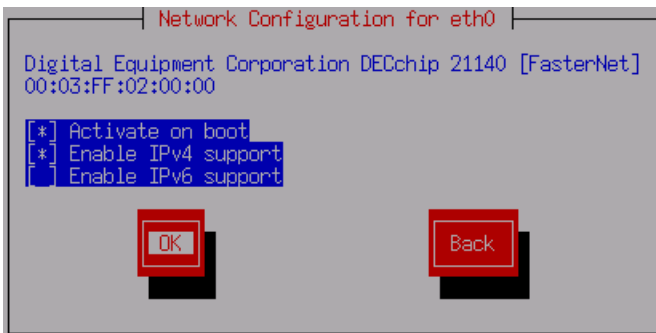


F1. Single Network Interface

Select Yes. Select No if you like but it will make it hard for you or users to access the server and any of the applications. If you do select No, the installer will go to the Miscellaneous Network Settings menu.

F2. Multiple Network Interfaces

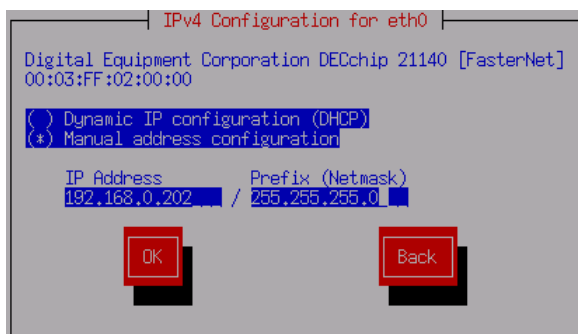
If the server PC has multiple network interfaces, this menu will list them and shows whether they have been configured or not. Select the interface you want to configure and then select Edit.



G: Network Configuration

You must select at least Activate on boot and Enable IPv4 support.

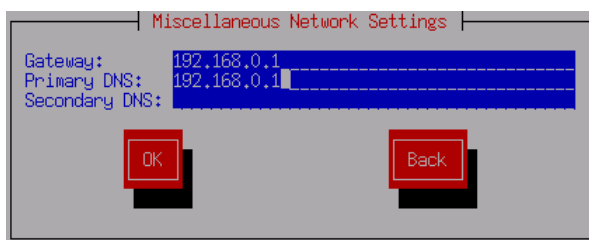
- Currently IPv6 is not used for any of the IP Office Application Server services.
- The address settings entered can be changed after installation but must be valid for initial browser access to the server's web configuration pages.



G1: IPv4 Address Settings

If Enable IPv4 support was selected, this menu is displayed to allow entry of the address settings.

- It is recommended that you use manual address configuration rather than DHCP.
- Do not use a restricted address such as 127.0.0.1.



G2: IPv6 Address Settings

If Enable IPv6 support was selected, this menu is displayed to allow entry of the address settings.

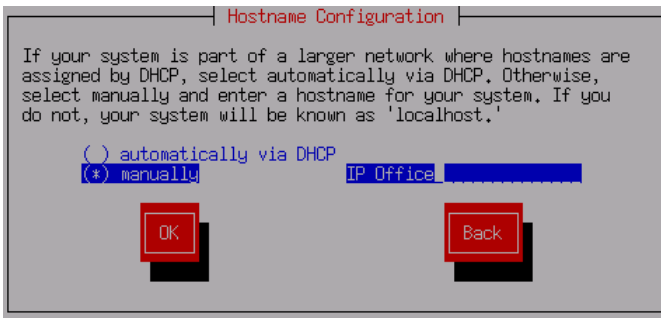
G3: Network Settings

The following general settings apply to the server if not using DHCP.

- The Gateway address must be set.
- The Primary DNS and Secondary DNS addresses can be left blank if not known. However, they should be set if possible.

G4. Multiple Network Interfaces (Again)

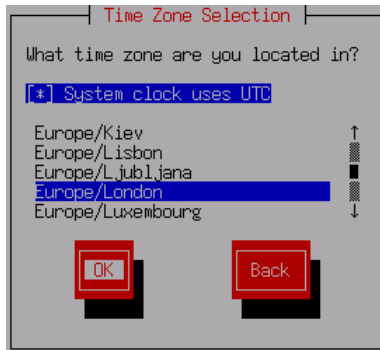
If the server PC has multiple network interfaces, the menu listing them is shown again and shows which have been configured or not. To configure another interface select it and then select Edit. When at least one of the interface has been configured, select OK.



H: Hostname Configuration

Having a hostname makes the server easier to access than using its IP address. You can select to obtain a hostname by DHCP, however not all DHCP servers support the issuing of hostnames.

- If expecting to use the Voicemail Pro service in a network of Voicemail Pro servers for functions like distributed voicemail or backup voicemail, a valid hostname is important. Do not use *localhost*.



I: Select Timezone

Select the timezone to match the customer location. This timezone setting is important as it is used to apply time offsets to the UTC time value. The time and date settings can be altered after installation using the server's web configuration pages.



J: Root Password

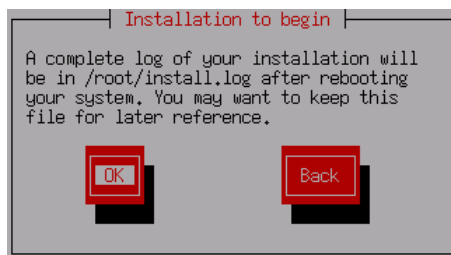
This is the default administrator password for access to the operating system. It is not normally used during IP Office Application Server configuration and maintenance. However ensure that you note the password set.

K: Preparing to Install

Based on the selections made in the previous menus, the installation software now prepares the files for installation.

L: Dependency Checks

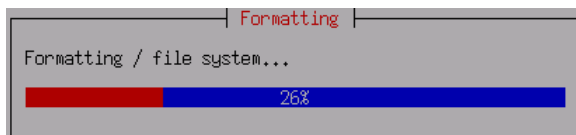
The installer checks that there are no conflicts or omissions within the installation selections.



M: WARNING !

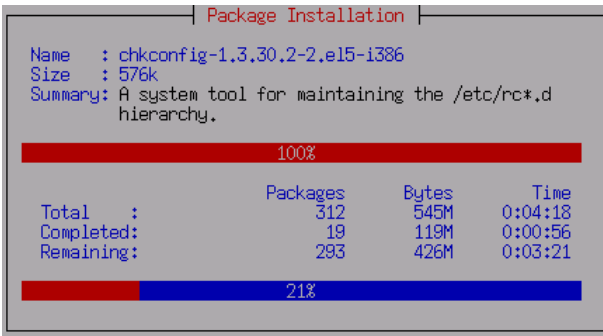
This is the last stage at which you can select Back to amend selections or to exit the installation process. If you select OK, the installer will start formatting the hard disk, erasing any existing data and applications.

- The log file can be downloaded after installation using an [SFTP/SSH application](#) ^[51].



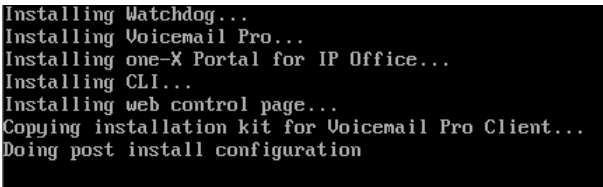
N: Formatting the Hard Disk

The server hard disk is now formatted.

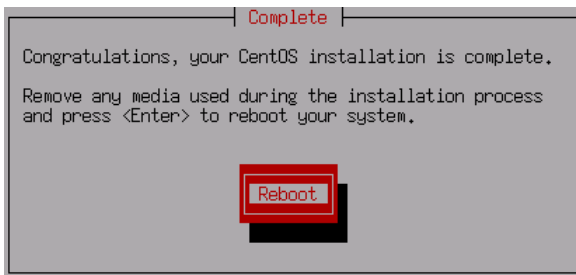


O: Copying the Installation File
The install image containing files to be installed is now copied to the formatted hard disk.

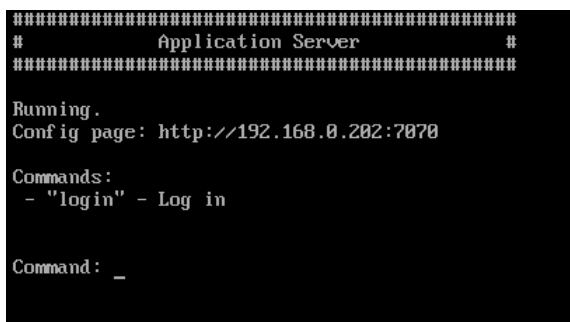
P: Installing the Operating System Files
The various files relating to the operating system are not copied to their correct locations on the hard disk.



Q: Installing the IP Office Applications
The installer will now copy and install the files for the previously selected IP Office applications plus some standard applications it uses for its own management.



R: Installation Complete
The installation of the operating system and IP Office applications is now complete. Remove the IP Office Application Server DVD from the server PC. Then select the Reboot option.



S: IP Office Application Server Booted
The adjacent screen is shown after successful start of the IP Office Application Server. The address shown is that for IP Office Application Server configuration access using a web browser.

- It is not necessary to login at this menu. All configuration of the IP Office Application Server is done through [remote web browser](#) access. The important detail on this display is the IP address, especially if the server is configured to obtain its address by DHCP.

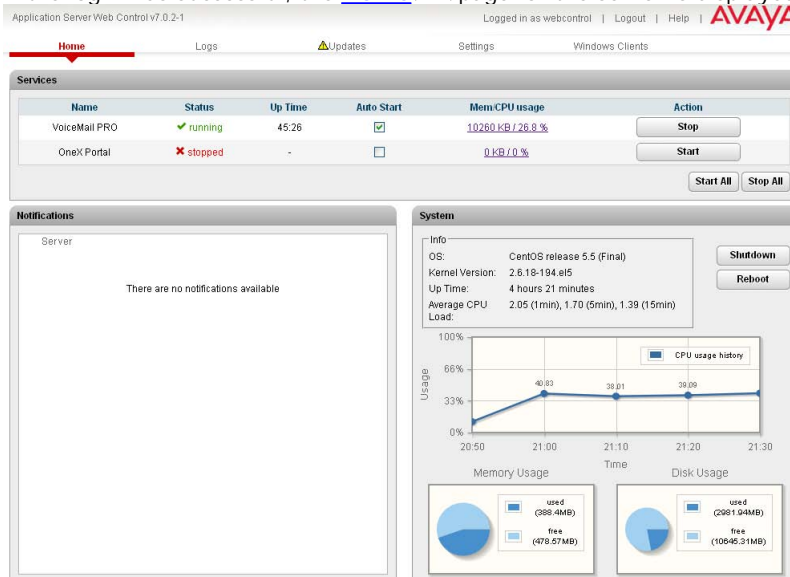
1.6 Logging In

Administration of the IP Office Application Server is done using a web browser on a client PC with network access to the IP Office Application Server.

1. From a client PC, start the browser and enter `http://` followed by the address of the IP Office Application Server and `:7070`. The port number used can be changed through the [Settings | General](#) page after logging in.
2. The IP Office Application Server login page should be displayed.



3. Select the Language required.
4. Enter the name and password configured for IP Office Application Server administration.
 - The default name and password are `webcontrol` and `web`. The password can be changed by selecting the [Change Password](#) option.
5. If the login was successful, the [Home](#) page for the server is displayed.



Name	Status	Up Time	Auto Start	Mem-CPU usage	Action
VoiceMail PRO	running	45:26	<input checked="" type="checkbox"/>	10280 KB / 26.8 %	Stop
OneX Portal	stopped	-	<input type="checkbox"/>	0 KB / 0.0 %	Start

1.7 Checking the Services

After [logging in](#)^[14] to the IP Office Application Server, the Home page provides an immediate summary of the services that the server can provide and the status (started or stopped) of those services.

1. Login and select the Home menu.

Name	Status	Up Time	Auto Start	Mem/CPU usage	Action
VoiceMail PRO	✓ running	45:26	<input checked="" type="checkbox"/>	10260 KB / 26.8 %	Stop
OneX Portal	✗ stopped	-	<input type="checkbox"/>	0 KB / 0 %	Start

Start All Stop All

2. Check that the expected services have been started. If not, each can be individually started using the Start/Stop buttons on the right.
3. Check the Notifications panel is not listing any errors that would indicate a problem with the installation.
4. If all the services are started as expected, each can be individually configured. See [one-X Portal for IP Office Configuration](#)^[16] and [Voicemail Pro Configuration](#)^[20].
5. If the sever is running correctly, logout and then log in again using the [Change Password](#)^[24] option.

1.8 one-X Portal for IP Office Configuration

At this stage, the one-X Portal for IP Office server software has been installed and the service started. However the IP Office system and the one-X Portal for IP Office service still requires configuration. During this configuration it will connect to the IP Office systems.

- The following is copied from the one-X Portal for IP Office Installation Manual. You should refer to that manual for full details of one-X Portal for IP Office configuration and administration.
1. Using IP Office Manager, check that the IP Office system is licensed for one-X Portal for IP Office usage and has at least one user configured as able to use the one-X Portal for IP Office.
 2. Open a web browser and enter the address of the IP Office Application Server followed by `:.8080/inyama/inyama.html?admin=true`. This is the login path for the administrator access to the one-X Portal for IP Office application.



3. The message *System is currently unavailable - please wait* may be displayed with the one-X Portal for IP Office application starts. When the message disappears, approximately 15 minutes after the one-X Portal for IP Office service was started, you can login.
4. Enter the default administrator name (*Administrator*) and password (*Administrator*) and click Login.

5. The License Agreement page is displayed.

STEP 1: License Agreement

You must read and accept this agreement.

AVAYA END USER LICENSE AND WARRANTY

For Customer Purchases from a Reseller

THIS END USER LICENSE AND WARRANTY AGREEMENT ("AGREEMENT") GOVERNS THE WARRANTY OF AVAYA'S PRODUCTS AND THE USE OF AVAYA'S PROPRIETARY SOFTWARE. READ THIS AGREEMENT CAREFULLY, IN ITS ENTIRETY, BEFORE INSTALLING OR USING THE AVAYA PRODUCT (S) (AS DEFINED BELOW). BY INSTALLING OR USING THE AVAYA PRODUCT(S), OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE INSTALLING OR USING THE PRODUCT(S) (HEREINAFTER REFERRED TO INTERCHANGEABLY AS "YOU" AND "END USER"), AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. ("AVAYA"). ANY USE OF THE PRODUCT(S) WILL CONSTITUTE YOUR ASSENT TO THE TERMS OF THIS AGREEMENT (OR RATIFICATION OF ANY PREVIOUS CONSENT).

Have Read & Agree

Next-> **Cancel**

6. When you have read the license, select Have Read & Agree and then click on Next.

7. The menu now allows entry of the IP addresses of the IP Office systems to which you want the one-X Portal for IP Office server to connect.

STEP 2: Setting the IP Office IP Addresses

Description

Now you need to specify sources of user lists, directories & telephony services. Enter a comma seperated list of the IP Address(es) of the IP Office Units which will be used.

For example enter: 192.168.42.1,192.168.42.2

In 'Advanced Provider Options' you may override default provider configuration values and specify an optional LDAP Directory Source common to all users.

IP Office Unit IP Address(es)

192.168.42.1

IP Office(s) not yet checked.

Simple Installation Advanced Installation

▶ Status

Check IP Office(s)-> **Configure for IP Office(s)->** **Next->** **Cancel & Restart**

- In the following menus, the ▶ Status icon can be used to show/hide status messages about the actions being performed by the installation process.

8. Enter the addresses in the form and select Check IP Office(s). The one-X Portal for IP Office server will attempt to connect to each of the indicated IP Offices. The orange background will change to green if this is successful.

IP Office Unit IP Address(es)

192.168.42.1

All IP Office(s) have acceptable firmware version & licensing

Simple Installation Advanced Installation

▶ Status

Check IP Office(s)-> Configure for IP Office(s)-> Next-> Cancel & Restart

9. If the customer has a Voicemail Pro voicemail server, click on Advanced Installation.

- Click on the Voicemail Provider tab and enter the IP address of the Voicemail Pro voicemail server. For IP Offices in a Small Community this should be the address of the centralized voicemail server (not that of the backup or any distributed voicemail servers).

Mid-Layer Telephony (CSTA) Directory (IP-Office) Directory (LDAP) **VoiceMail-Provider**

Provider's Mid-Layer Username izwi_user

Provider's Mid-Layer Password ●●●●●●●●

Provider runs on Port 8080

Assign New Voicemail Server Unit

ID	VoiceMailServer IP Address	
0	EnterValidIPAddress	Delete

10. If the customer has provided details of an LDAP directory source, click on Advanced Installation if not already selected.

- Click on the Directory (LDAP) tab. Enter the LDAP server information into the fields labeled LDAP.

Mid-Layer Telephony (CSTA) Directory (IP-Office) **Directory (LDAP)** VoiceMail-Provider

Provider's Mid-Layer Username indoda_user

Provider's Mid-Layer Password ●●●●●●●●

Provider runs on Port 8080

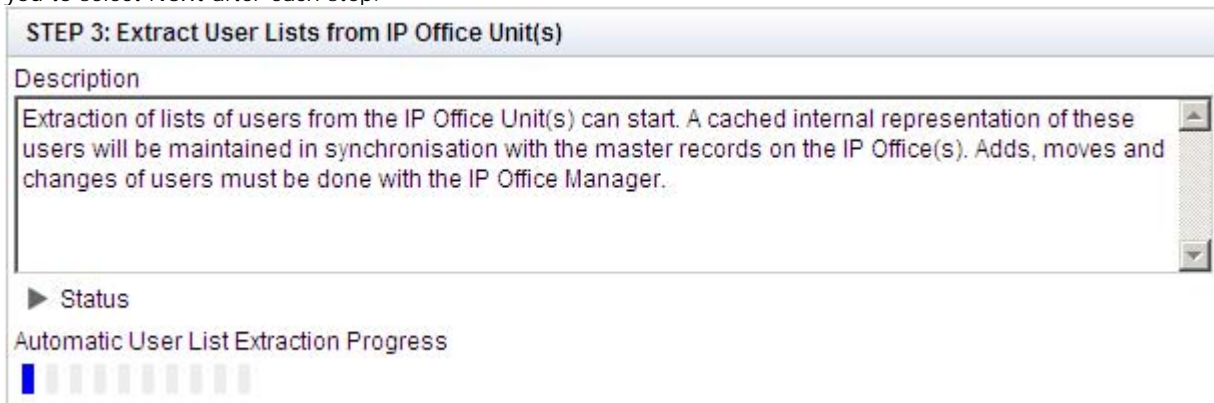
LDAP Server Address ldap://ldap-server-ip-addre

LDAP Server Username global\your-username

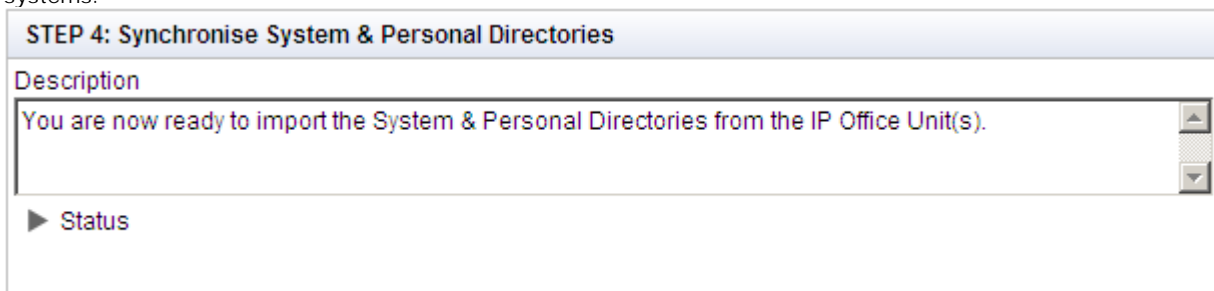
LDAP Server Password ●●●●●●●●

LDAP Server Base DN OU=myregion,OU=mybus

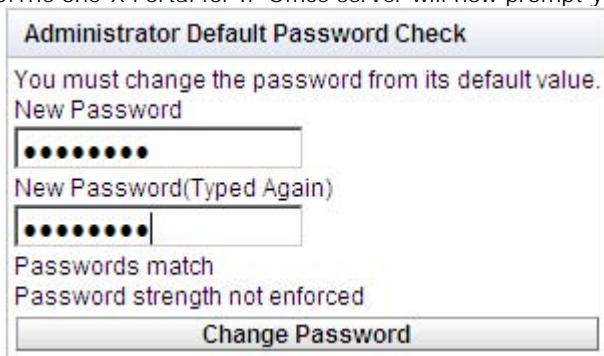
11. Click on Configure for IP Office(s). The one-X Portal for IP Office server will connect with each IP Office and automatically extract details of the IP Office users. If Simple Installation was selected, the installer will go through this and the following steps automatically. If Advanced Installation was selected, the installer will require you to select Next after each step.



12. Having extracted user details, the one-X Portal for IP Office server will extract directory details from the IP Office systems.



13. The one-X Portal for IP Office server will now prompt you to change the password used for administrator access.



14. Enter a new password and click Change Password.

15. The initial configuration is complete. Note that it may be at least another 5 minutes before the one-X Portal for IP Office is usable by end users.

16. Click on Log Out.

17. Remove the *?Admin=* suffix from the browser URL and reload.

18. The login window will display *System in currently unavailable*. When this message is no longer displayed, attempt to login as a user.

1.9 Voicemail Pro Configuration

The Voicemail Pro server provided installed on the IP Office Application Server uses the same Windows based Voicemail Pro client as used for Windows based Voicemail Pro servers. A copy of the Voicemail Pro client software can be downloaded for installation from the IP Office Application Server's [Windows Client](#) page.

- The following is a basic summary for connecting the Voicemail Pro client to the voicemail server on the IP Office Application Server. For full details of voicemail server configuration and operation refer to the Voicemail Pro Installation and Configuration Manual.
 1. Using IP Office Manager, ensure that the IP Office system has licenses for Voicemail Pro support and is configured to use Voicemail Pro as its voicemail server.
 2. Start the Voicemail Pro client.
 3. If the VmPro Login widows does not automatically appear, select File | Login.
 4. Either Browse for the IP Office Application Server or manually enter its IP address in the Unit Name\IP Address field.
 5. Enter the User Name and User Password for a Voicemail Pro administrator account. The default name and password are Administrator and Administrator.
 6. Click Login.
 7. The top folder in the navigation tree should show the name and IP address of the IP Office system. If it shows 0.0.0.0, it implies that the IP Office system is not correctly licensed and configured to use the Voicemail Pro on the IP Office Application Server.
 8. Click on Help | About. The details shown will confirm the IP Office licensing for Voicemail Pro features.
 9. You can now configure and customize operation of the voicemail server. It is strongly recommended that the first configuration action is to select File | Change password to change the password of the default administrator account. You can also click on the Voicemail Pro Administrators folder in order to create additional administrator accounts.

Voicemail Pro Features

For Voicemail Pro server running on the IP Office Application Server, the following Voicemail Pro features are not supported:

- VB Scripting.
- TTS Text to Speech.
- MAPI Email.
- UMS Exchange Integration.
- ContactStore.
- 3rd Party Database Integration.
- VPNM.
- UMS Web Voicemail
However access via IMAP and one-X Portal for IP Office are available as alternatives.

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

The Voicemail Pro client's backup and restore functions cannot currently be used to move voicemail data between a Linux based server and a Windows based server or vice versa. The client functions for importing and exporting module and the call flow database can be used.

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 allowed.

Chapter 2.

Server Configuration

2. Server Configuration

The main configuration and control of the IP Office Application Server is done via web browser access. After logging in using the administrator name and password, you are able to view the status of the services provided by the server and to perform actions such as stopping or starting those services.

- [Logging In](#) ^[23]
 - [Changing the Web Password](#) ^[24]
 - [Starting/Stopping Application Services](#) ^[25]
 - [Server Shutdown](#) ^[26]
 - [Rebooting the Server](#) ^[26]
 - [Changing the IP Address Settings](#) ^[27]
 - [Checking the DHCP Address](#) ^[28]
 - [Date and Time Settings](#) ^[29]
 - [Upgrading an Application](#) ^[30]
 - [Uninstalling an Application](#) ^[31]
 - [Setting Update Repositories](#) ^[32]
- [\[****\]](#) ^[50]

2.1 Logging In

1. From a client PC, start the browser and enter `http://` followed by the address of the IP Office Application Server and `:7070`. The port number used can be changed through the [Settings | General](#) page after logging in.
2. The IP Office Application Server login page should be displayed.

3. Select the Language required.
4. Enter the name and password configured for IP Office Application Server administration.
 - The default name and password are `webcontrol` and `web`. The password can be changed by selecting the [Change Password](#) option.
5. If the login was successful, the [Home](#) page for the server is displayed.

Name	Status	Up Time	Auto Start	Mem.CPU usage	Action
VoiceMail PRO	running	45:26	<input checked="" type="checkbox"/>	10280 KB / 26.8 %	Stop
OneX Portal	stopped	-	<input type="checkbox"/>	0 KB / 0 %	Start

System Info:

- OS: CentOS release 5.5 (Final)
- Kernel Version: 2.6.18-194.el5
- Up Time: 4 hours 21 minutes
- Average CPU Load: 2.05 (1min), 1.70 (5min), 1.39 (15min)

Memory Usage:

- used: 388.4MB
- free: 478.57MB

Disk Usage:

- used: 2281.04MB
- free: 10845.31MB

2.2 Change the Web Password

From the [Login](#) ^[14] menu you can select the Change Password option to perform a password change. When selected, fields are displayed to enter the current password and for entry and confirmation of the new password. This password is also used for [SSH file access](#) ^[51] to the server.

1. From a client PC, start the browser and enter `http://` followed by the address of the IP Office Application Server and `:7070`. The port number used can be changed through the [Settings | General](#) ^[43] page after logging in.
2. The IP Office Application Server login page should be displayed.



3. Select the Language required.
4. Click on the Change password link. The change password menu is displayed.



5. Enter the current password and the new password.
6. Click OK. The menu will confirm whether the change was successful or not.
7. If the new password is accepted, click Cancel to return to the Login menu and then [login](#) ^[23] with the new password.

2.3 Starting/Stopping Application Services

The IP Office application services installed on the IP Office Application Server can be started and stopped individual. This may be necessary for maintenance or if a particular service is not currently required, 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. [Login](#) to the IP Office Application Server's web configuration pages.
2. Select Home (this is normally 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.

Stopping a Service

2. [Login](#) to the IP Office Application Server's web configuration pages.
3. Select Home (this is normally 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 Stop button next to the service. To stop all the services that are currently running, click on the Stop All button.
4. The service's status changes to stopping while it is being stopped. If it remains in this state too long, the service can be forced to stop by clicking on Force Stop.

Setting a Service to Auto Start

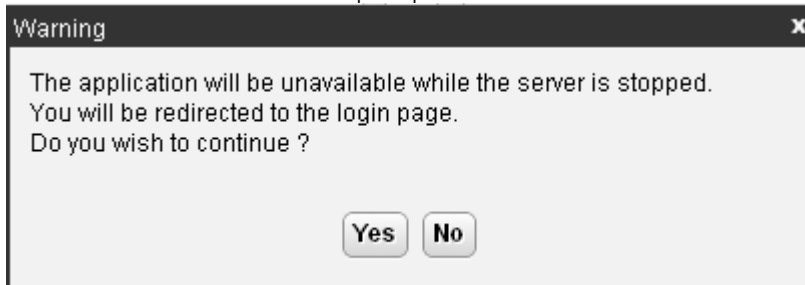
By default, no service is set to start automatically when the IP Office Application Server starts.

3. [Login](#) to the IP Office Application Server's web configuration pages.
4. Select Home (this is normally selected by default after logging in). The services and their current status (running or stopped) are listed.
3. Use the Auto Start check box to indicate whether a service should automatically start when the IP Office Application Server is started.

2.4 Server Shutdown

This process should be used when it is necessary to switch off the IP Office Application Server for any period. Once the process has been completed, power to the server can be switched off. To restart the server, switch the server power back on.

1. [Login](#)^[23] to the IP Office Application Server's web configuration pages.
2. After logging in the default page displayed is the [Home](#)^[37] page. This page includes a server Shutdown button.
3. Click on Shutdown. You will be prompted to confirm the action.

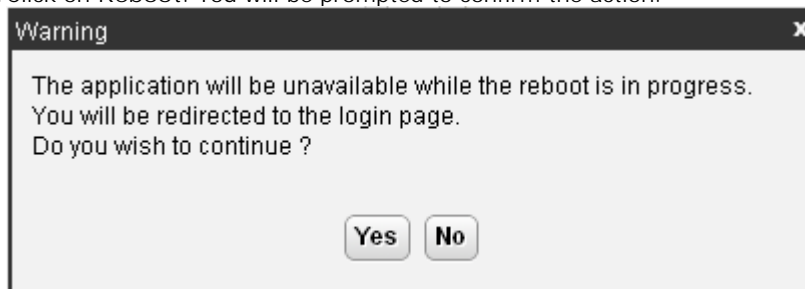


4. Click Yes to confirm that you want to proceed with the shutdown.
5. The login page will be displayed again. Do not login again as the IP Office Application Server will still be in the process of stopping services.
6. After a few minutes, typically no more than 2 minutes though this will vary depending on the hardware specification of the server, the server will shutdown.
7. Switch off power to the server.

2.5 Rebooting the Server

Rebooting the server will stop all currently running services and then stop and restart the server. Only those IP Office application services which are set to [Auto Start](#)^[25] will be automatically restarted after the reboot.

1. [Login](#)^[23] to the IP Office Application Server's web configuration pages.
2. After logging in the default page displayed is the [Home](#)^[37] page. This page includes a server Reboot button.
3. Click on Reboot. You will be prompted to confirm the action.



4. Click Yes to confirm that you want to proceed with the reboot.
5. The login page will be displayed again. Do not login again immediately as the IP Office Application Server will still be in the process of stopping services prior to a reboot of the server.
6. After a few minutes, typically no more than 5 minutes though this will vary depending on the hardware specification of the server, you should be able to login again.
7. Once logged in you can manually restart any services required if not set to Auto Start.

2.6 Changing the IP Address Settings

The IP address and other network settings used by the server PC can be changed through the server's web configuration pages.

- **Warning**

Changing IP address and other network settings of the server PC will require you to login again. If the server is using DHCP or is switched to DHCP, the address obtained for the server is displayed on the server's [command line display](#).

1. [Login](#) to the IP Office Application Server's web configuration pages.
2. Select Settings.
3. Select System.
4. The IP address settings are shown in the Network section.
 - **Network Interface**
If the server PC has multiple ethernet interfaces, this drop down allows selection of which of the interfaces is currently being configured by the web form.
 - **Host Name**
Sets the host name that the IP Office Application Server should use. This setting requires the local network to support a DNS server.
 - **Use DHCP**
If selected, the IP address, subnet mask and default gateway information is obtained by the server making DHCP requests. The related fields are greyed out and cannot be set manually, instead they show the values obtained in response to the DHCP request.
 - **IP Address**
Displays the IP address set for the server. If DHCP is not being used, the field can be edited to change the setting.
 - **Subnet Mask**
Displays the subnet mask applied to the IP address. If DHCP is not being used, the field can be edited to change the setting.
 - **Default Gateway**
Displays the default gateway settings for routing. If DHCP is not being used, the field can be edited to change the setting.
 - **DNS**
Enter the address of the primary DNS server. This option is greyed out if the address of the DNS server is set to be obtained from the DHCP server (see below).
 - **Automatically obtain DNS from provider**
This setting is only used if Use DHCP is also selected. If selected, the server will attempt to obtain DNS server details from the DHCP server.
5. Click Save. The server PC is restarted.

2.7 Checking the DHCP Address

If the server is [configured to use DHCP](#) to obtain its IP address, the details of the address are shown on the server's own command line display. This requires direct access to the server.

```
#####  
#           Applications Appliance DVD           #  
#####  
  
Running.  
Config page: http://192.168.0.220:7070  
  
Commands:  
- "login" - Log In  
  
Command: _
```

2.8 Date and Time Settings

The date and time settings used by the server PC can be changed through the server's web configuration pages.

1. [Login](#) to the IP Office Application Server's web configuration pages.
2. Select Settings.
3. Select System.
4. The IP address settings are shown in the Network section.
 - **Date**
Shows the current date being used by the server. If Enable Network Time Protocol is selected, this is the date obtained from the NTP server and cannot be manually changed.
 - **Time**
Shows the current UTC time being used by the server. If Enable Network Time Protocol is selected, this is the time obtained from the NTP server and cannot be manually changed.
 - **Timezone**
In some instances the time displayed or used by a function needs to be the local time rather than UTC time. The Timezone field is used to determine the appropriate offset that should be applied to the UTC time above.
 - **Enable Network Time Protocol**
If this option is selected, the IP Office Application Server will attempt to obtain the current UTC time from the NTP servers listed in the NTP Servers list below. It will then use that time and make regular NTP requests to update the date and time. The following options are only used if Enable Network Time Protocol is selected.
 - **NTP Servers**
This field is used to enter the IP address of an NTP server or servers which should be used when Enable Network Time Protocol is selected. Enter each address as a separate line. The network administrator or ISP may have an NTP server for this purpose. A list of publicly accessible NTP servers is available at <http://support.ntp.org/bin/view/Servers/WebHome>, however it is your responsibility to make sure you are aware of the usage policy for any servers you choose. Choosing several unrelated NTP servers is recommended in case one of the servers you are using becomes unreachable or its clock is unreliable. The operating system uses the responses it receives from the servers to determine which are reliable.
 - An IP Office Release 6.1+ systems can also use NTP to obtain its system time. Using the same servers for the IP Office Application Server and IP Office system is recommended.
 - **Synchronize system clock before starting service**
When using NTP, the time obtained by the operating system is used to gradually change the server PCs hardware clock time. If this option is selected, an immediate update of the server PC clock to match the NTP obtained time is forced.
 - **Use local time source**
When using NTP, the time obtained by the operating system is used to gradually change the server PCs hardware clock time. If this option is selected, the PCs hardware clock time is used as the current time rather than the NTP time.
5. Click Save.

2.9 Upgrading Applications

The IP Office application services hosted by the IP Office Application Server can be upgraded without having to reinstall or upgrade the whole server. This is done using files either uploaded to the server (local) or downloaded by the server from an HTTP folder (remote repository), see [File Repositories](#) ^[32].

Once an .rpm file or files are available, the IP Office Application Server web configuration pages will list the available versions and allow switching between versions or simple upgrading to the latest version.

- **Warning**
Before upgrading or changing the version of any installed application or operating system components, you must ensure that you have read the Avaya Technical Bulletins for the IP Office Application Server. The Technical Bulletins will detail supported versions of software and known issues or additional actions required for upgrading.

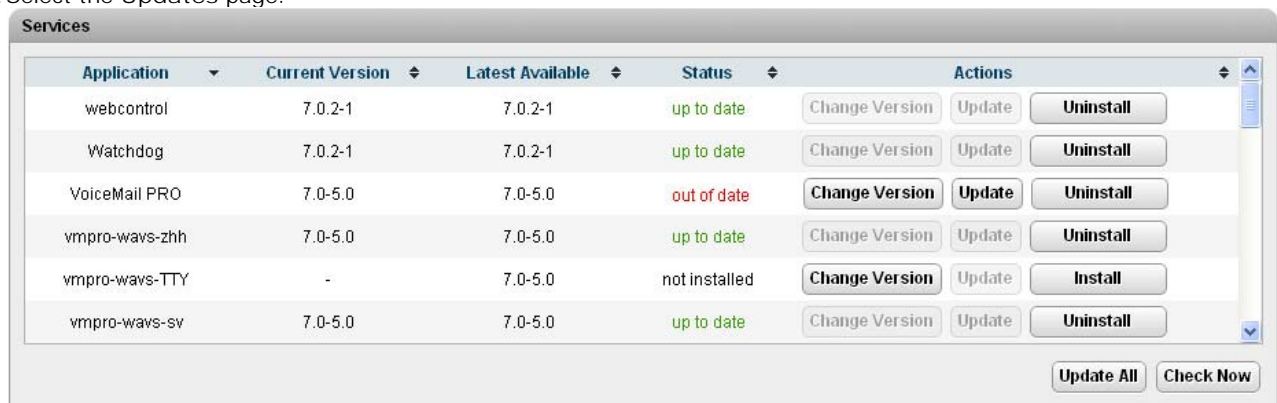
Loading Application Files onto the Server

This method uploads the .rpm file for an application onto the server PC. The files can then be used to update the IP Office applications. The alternative is to use files loaded into a [remote software repository](#) ^[34].

1. [Login](#) ^[23] to the IP Office Application Server's web configuration pages.
2. Select the Settings menu and then the General sub-menu.
3. Check that the Local checkbox for Applications is selected.
4. Click on the Browse button and browse to the [location of the file](#) ^[32] that you want to load and select the file. The file name should now be listed in the File field.
5. Click Add. The server will now start uploading the file. The progress of the upload is displayed at the bottom of the browser window.
6. Repeat the process for any other files required.
 - **Voicemail Pro**
Each version of the Voicemail Pro server application is split into separate .rpm files for the server and each of the prompt languages it supports. Unless advised otherwise you should copy or upload the full set of files to the file repository.

Upgrading/Changing Application Versions

2. [Login](#) ^[23] to the IP Office Application Server's web configuration pages.
2. Select the Updates page.



Application	Current Version	Latest Available	Status	Actions
webcontrol	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
Watchdog	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
VoiceMail PRO	7.0-5.0	7.0-5.0	out of date	Change Version Update Uninstall
vmpro-wavs-zhh	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall
vmpro-wavs-TTY	-	7.0-5.0	not installed	Change Version Update Install
vmpro-wavs-sv	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall

Update All Check Now

3. The Services section displays the current version and latest available version of each IP Office application service.
 - Some applications (for example one-X Portal for IP Office) do not support upgrading or downgrading whilst currently installed. For those applications the Change Version and Update buttons remain greyed out even if there are updates available in the application file repository. These applications must first be uninstalled using the Uninstall button before the Change Version and Update buttons become useable.
4. Select one of the following actions:
 - To update an application to the latest version available, click on Update.
 - To update all applications to the latest version available, click on Update All.
 - To change the current version of an application, click on Change Version. Select the version required and click Apply.

2.10 Uninstalling an Application

The Updates menu can also be used to uninstall an IP Office application service. When uninstalled the application is removed from the list of available service unless files for reinstallation are present in the configured file repository.

1. [Login](#) ^[23] to the IP Office Application Server's web configuration pages.
2. Select the Updates page.


Application	Current Version	Latest Available	Status	Actions
webcontrol	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
Watchdog	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
VoiceMail PRO	7.0-5.0	7.0-5.0	out of date	Change Version Update Uninstall
vmpro-wavs-zhh	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall
vmpro-wavs-TTY	-	7.0-5.0	not installed	Change Version Update Install
vmpro-wavs-sv	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall

Update All Check Now

3. The Services section displays the current version and latest available version of each IP Office application service.
4. To uninstall a service, click on Uninstall.
 - If there are installation files for the application available in the application [file repository](#) ^[32], the button will change to become an Install button.
 - If there are no installation files for the application available in the file repository, the application is no longer listed.

2.11 File Repositories

The [Updates](#) ^[40] and [Web Client](#) ^[48] menus use files stored in the configured file repositories. Each repository can be either a set of files uploaded to the sever or the URL of a remote folder on an HTTP server.

You can add files to these repositories without affecting the existing operation of the server. However when the application or operating system repositories contain later versions of the files than those currently installed, a  icon is displayed on the Updates menu.

2.11.1 Source Files

Update files may be made available individually in response to particular issues or to support new IP Office releases. The files are also included on the IP Office Application Server DVD. Files can be extracted from a DVD .iso image using an application such as WinZip.

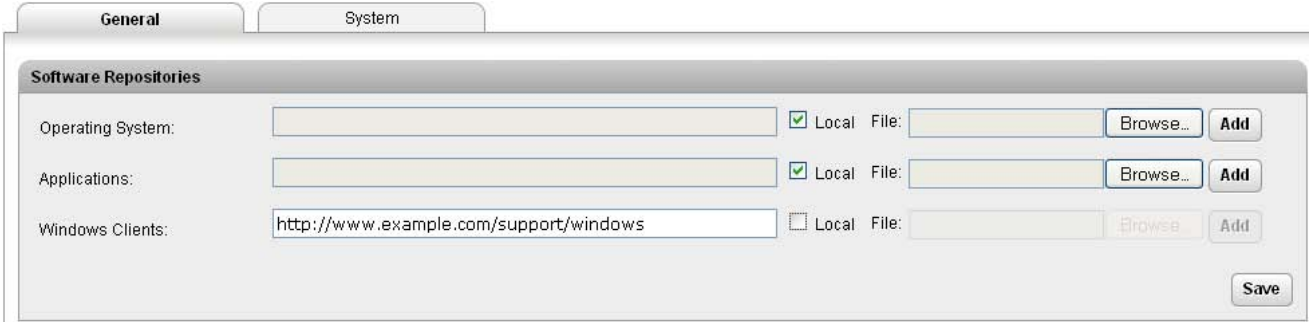
- **Warning**
Before upgrading or changing the version of any installed application or operating system components, you must ensure that you have read the Avaya Technical Bulletins for the IP Office Application Server. The Technical Bulletins will detail supported versions of software and known issues or additional actions required for upgrading.

		File Type	DVD/.iso Folder
IP Office Application Files	Voicemail Pro	.rpm	\AVAYA\VMPro
	one-X Portal for IP Office	.rpm	\AVAYA\ONEX
Windows Client Files		.exe	\AVAYA\THICK_CL
Operation System Files		.rpm	\CENTOS

- **Voicemail Pro**
Each version of the Voicemail Pro server application is split into separate .rpm files for the server and each of the prompt languages it supports. Unless advised otherwise you should copy or upload the full set of files to the file repository.

2.11.2 Setting the Repository Locations

The IP Office Application Server can use either remote or local software repositories to store software update files. Separate repositories are configured for operating system updates, IP Office application installation files and Windows client files.



The screenshot shows the 'Software Repositories' configuration window. It has two tabs: 'General' (selected) and 'System'. Under 'General', there are three rows for configuring repositories:

- Operating System:** A text field is empty. The 'Local' checkbox is checked. To the right are 'File', 'Browse...', and 'Add' buttons.
- Applications:** A text field is empty. The 'Local' checkbox is checked. To the right are 'File', 'Browse...', and 'Add' buttons.
- Windows Clients:** A text field contains 'http://www.example.com/support/windows'. The 'Local' checkbox is unchecked. To the right are 'File', 'Browse', and 'Add' buttons.

A 'Save' button is located at the bottom right of the window.

The files uploaded or present in the file repositories are used by the [Updates](#) ^[40] and [Windows Clients](#) ^[48] menus.

- **Repository**
If the Local option is not selected, this field is used to set the URL of a [remote HTTP file repository](#) ^[34]. Note that each repository must be different, the same URL must not be used for multiple repositories.
- **Local**
This checkbox is used to set whether the file repository used is local (files stored on the IP Office Application Server or remote (a folder on a HTTP web server specified in the Repository field).
- **File / Browse / Add**
If the Local option is selected, this field and adjacent buttons can be used to browse to a specific update file. When the file is located and selected, click Add to upload the file to the file store on the IP Office Application Server.

2.11.3 Uploading Local Files

The processes below can be used to upload files to the server if it is being used as a repository for that type of file.

Uploading Application Files

This method uploads the .rpm file for an application onto the server PC. The files can then be used to update the IP Office applications. The alternative is to use files loaded into a [remote software repository](#)^[34].

1. [Login](#)^[23] to the IP Office Application Server's web configuration pages.
2. Select the Settings menu and then the General sub-menu.
3. Check that the Local checkbox for Applications is selected.
4. Click on the Browse button and browse to the [location of the file](#)^[32] that you want to load and select the file. The file name should now be listed in the File field.
5. Click Add. The server will now start uploading the file. The progress of the upload is displayed at the bottom of the browser window.
6. Repeat the process for any other files required.
 - Voicemail Pro
Each version of the Voicemail Pro server application is split into separate .rpm files for the server and each of the prompt languages it supports. Unless advised otherwise you should copy or upload the full set of files to the file repository.

Uploading Operating System Files

This method uploads the .rpm file for an application onto the server PC. The files can then be used to update the IP Office applications. The alternative is to use files loaded into a [remote software repository](#)^[34].

2. [Login](#)^[23] to the IP Office Application Server's web configuration pages.
3. Select the Settings menu and then the General sub-menu.
3. Check that the Local checkbox for Operating System is selected.
7. Click on the Browse button and browse to the [location of the file](#)^[32] that you want to load and select the file. The file name should now be listed in the File field.
8. Click Add. The server will now start uploading the file. The progress of the upload is displayed at the bottom of the browser window.
9. Repeat the process for any other files required.

Uploading Windows Client Files

This method uploads the .rpm file for an application onto the server PC. The files can then be used to update the IP Office applications. The alternative is to use files loaded into a [remote software repository](#)^[34].

3. [Login](#)^[23] to the IP Office Application Server's web configuration pages.
4. Select the Settings menu and then the General sub-menu.
3. Check that the Local checkbox for Windows Clients is selected.
10. Click on the Browse button and browse to the [location of the file](#)^[32] that you want to load and select the file. The file name should now be listed in the File field.
11. Click Add. The server will now start uploading the file. The progress of the upload is displayed at the bottom of the browser window.
12. Repeat the process for any other files required.

2.11.4 Creating Remote Software Repositories

Alternatively to using [local files uploaded to the server](#)^[30] for updates, the server can be configured to display the versions of files available for use in remote file folders hosted on an HTTP server.

Creating an Application Update Repository

As an alternative to uploading individual .rpm files to the IP Office Application Server, sets of .rpm files can be stored in folders on an HTTP server. The IP Office Application Server is then given the URL of the folders and checks that location for possible updates.

1. Create a folder on the web server for the remote file repository. For example a folder called *Applications*.
2. If the folder is a sub-folder of the existing web site it will be browseable as part of that website's URL, ie. if the folder is a sub-folder of *wwwroot*. If the folder is on a separate path, then it must be mapped to the web server URL path, the process for this will depend on the HTTP server being used.
3. The folder directory must be browseable. For example, in IIS right -click on the folder, select Properties and ensure that Directory Browse option is selected.
4. Copy the .rpm files from their [source](#)^[32] into the folder.
5. From another PC, test that you can browse to the URL of the folder and that the list of files in the folder is displayed.
6. Login to the IP Office Application Server web configuration pages.
7. Select Settings and then General.
8. Uncheck the Local checkbox for Applications. Enter the URL of the HTTP server folder into the preceding field.
9. Click Save.
10. Select Updates.
11. If the IP Office Application Server is able to access the HTTP folder, the details of versions available will now reflect this available in that folder. The message *repository error* indicates that the IP Office Application Server was not able to connect to the folder or not able to list the files in the folder.

Creating an Windows Client Repository

The process is the similar to that shown above for application .rpm files. However a separate folder on the HTTP server must be used and the files placed in it are the .exe files used for installing the Windows applications.

Creating an Operating System Repository

The repository for operating system updates is different from those used for application updates and Windows clients. It must be a YUM repository, details of how to setup and configure a YUM repository will depend on the version of Linux being used on the HTTP server. Each time an .rpm file is added, deleted or changed, the directory must be updated using the `createrepo <folder_path>` command.

In order to host the repository on a Windows web server, the folder must be setup and maintained on a Linux server where the `createrepo` command can be used and the folder then copied to the Windows server.

Chapter 3.

Server Menus

3. Server Menus

The IP Office Application Server web configuration pages are as follows:

- [Home](#)^[37]
This menu gives an overview of the current status of the server and the IP Office application services it is hosting.
- [Logs](#)^[38]
This menu has sub-menus for viewing and managing log records and log files.
 - [View](#)^[38]
View the current log files for the server and the IP Office application services hosted by the server.
 - [Download](#)^[39]
Create and download archive files of existing log records.
- [Updates](#)^[40]
Display the versions of applications and components installed and the alternate versions available.
- [Settings](#)^[43]
This menu has sub-menus for various areas of server configuration and operation.
 - [General](#)^[43]
General server settings such as the locations of software update repositories.
 - [System](#)^[46]
View and manage the server setting for date, time and IP address details.
- [Windows Clients](#)^[48]
This page can be used to download the installation packages for Windows applications such as the Voicemail Pro client application.

3.1 Home

The Home menu provides an overview of the server status including the status of the IP Office services running on the server.

Application Server Web Control v7.0.2-1 Logged in as webcontrol | Logout | Help | **AVAYA**

Home | Logs | Updates | Settings | Windows Clients

Services

Name	Status	Up Time	Auto Start	Mem/CPU usage	Action
VoiceMail PRO	✓ running	45:26	<input checked="" type="checkbox"/>	10260 KB / 26.8 %	Stop
OneX Portal	✗ stopped	-	<input type="checkbox"/>	0 KB / 0 %	Start

Start All Stop All

Notifications

Server

There are no notifications available

System

Info

OS: CentOS release 5.5 (Final) Shutdown

Kernel Version: 2.6.18-194.el5 Reboot

Up Time: 4 hours 21 minutes

Average CPU Load: 2.05 (1min), 1.70 (5min), 1.39 (15min)

Time	Usage (%)
20:50	0
21:00	40.83
21:10	38.01
21:20	39.09
21:30	39.09

Memory Usage

used (388.4MB)
free (478.57MB)

Disk Usage

used (2981.94MB)
free (10645.31MB)

- Services**
 This table lists the services being supported by the server. In addition to showing the status of the service, it also contains buttons to start/stop each service and to select whether the service should be automatically started whenever the server is started. Clicking on the link for Mem/CPU usage will display a summary graph of CPU and memory usage by the application.
- Notifications**
 This table gives a summary of the most recent log messages generated by the services running on the IP Office Application Server. More detailed information is available through the [Logs](#) page.
- System**
 This table gives a general overview of the server status. This section also provides controls to shutdown or reboot the server. Note that it may take up to 10 minutes for CPU usage data to appear after a server reboot.
 - Shutdown**
 Selecting this button will start a process that will stop all the IP Office services and then shutdown IP Office Application Server. This process should be used when it is necessary to switch off the IP Office Application Server for any period. Once the process has been completed, power to the server can be switched off. To restart the server, switch the server power back on.
 - Reboot**
 Selecting this button will start a process that will stop all the IP Office services and then stop and restart the IP Office Application Server and services. Note that this stops all services. To stop and restart individual IP Office application services, use the buttons shown for each service in the Services panel above.

3.2 Logs

The logs menu is divided into two sub-menus:

- [View](#) ^[38]
View the current log files for the server and the IP Office application services hosted by the server.
- [Download](#) ^[39]
Create and download archive files of existing log records.

3.2.1 View

This page of the web browser interface can be used to view application logs and audit log records.

The screenshot shows the 'Application Server Web Control v7.0.2-1' interface. The 'Logs' menu is highlighted in red. Below it, there are two sub-menus: 'View' and 'Download'. The 'View' sub-menu is active, displaying two log tables.

Application Log

Application	Message
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: bool TFileHandler::Open(const TCHAR*, OpenFileMode, NewLine_Mode, bool, bool) - Error 2 (No such file or directory) opening file "etc/vmpro_user_variables.ini".
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: bool TFileHandler::Open(const TCHAR*, OpenFileMode, NewLine_Mode, bool, bool) - Error 2 (No such file or directory) opening file "opt/vmpro/Accounts/SMTPMAPPINGS.INI".
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: Validating directory "opt/vmpro/Greetings"
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: VMRegistry - created directory "opt/vmpro/Greetings"
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: Validating directory "opt/vmpro/Accounts"
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: VMRegistry - created directory "opt/vmpro/Accounts"
VoiceMail PRO	Sep 16 17:33:03 APPSDVD vmpro [2700]: b7efe700: Validating directory "opt/vmpro/Wavs/Modules"
VoiceMail PRO	Sep 16 17:33:08 APPSDVD vmpro [2700]: b7efe700: VMRegistry - created directory "opt/vmpro/Wavs/Modules"
VoiceMail PRO	Sep 16 17:33:08 APPSDVD vmpro [2700]: b7efe700: Validating directory "opt/vmpro/Wavs/Custom"

Audit Log

Timestamp	User	Action
2010-09-16 20:50:30	webcontrol	change autostart state for VoiceMail PRO to on
2010-09-16 20:50:27	webcontrol	start VoiceMail PRO service
2010-09-16 20:43:27	webcontrol	logged in
2010-09-16 18:11:42	webcontrol	uninstall OneX Portal
2010-09-16 17:57:03	webcontrol	start OneX Portal service
2010-09-16 17:56:59	webcontrol	force stop VoiceMail PRO service
2010-09-16 17:56:53	webcontrol	change autostart state for VoiceMail PRO to off
2010-09-16 17:56:35	webcontrol	stop VoiceMail PRO service
2010-09-16 17:51:39	webcontrol	start OneX Portal service
2010-09-16 17:51:35	webcontrol	start OneX Portal service

- **Application Log**
This table lists the log records for a selected server application supported by the IP Office Application Server. The Application drop-down is used to select which records are shown. Clicking on a column header sorts the records using that column. The records shown are all those generated since the last time the log files were archived using the Create Archive command on the [Logs | Download](#) ^[39] page. The level of log information output by each service is set through the individual service's administration menus, not through the IP Office Application Server menus.
- **Audit Log**
This table lists the actions performed by users logged in through the IP Office Application Server's web browser interface. Clicking on a column header sorts the records using that column.

3.2.2 Download

This page is used to create, manage and download archives of previous log files. The log files are compressed into an archive file which can then be downloaded by clicking on the link.

The archive files are in `.tar.gz` format. The log files within this type of archive file can be extracted by a range of utility applications including WinZip.

Application Server Web Control v7.0.2-1 Logged in as webcontrol | Logout | Help | AVAYA

Home **Logs** Updates Settings Windows Clients

View **Download**

Debug Files

Name	Last Modified	Size	Delete
arc_core.vnpro.15906.tar.gz	2010-09-29 10:41:35	1.0M	<input type="checkbox"/>

Logs

Name	Last Modified	Size	Delete
system_logs_2010-09-30-15-59.tar.gz	2010-09-30 15:59:47	11.6K	<input type="checkbox"/>
install_logs_2010-09-30-15-59.tar.gz	2010-09-30 15:59:47	6.2K	<input type="checkbox"/>
webcontrol_logs_2010-09-30-15-59.tar.gz	2010-09-30 15:59:47	3.5K	<input type="checkbox"/>
vnpro_logs_2010-09-30-15-59.tar.gz	2010-09-30 15:59:47	8.1K	<input type="checkbox"/>

To Create Archive Files

1. Click on the Create Archive button. Any log records recorded since the last creation of an archive are placed into archive files for each service.
2. The new archive files are listed in the web page.

To Download Archive Files

1. Any archive file can be downloaded by clicking on the file name of the archive file.
2. The process for the download and the location to which the file is downloaded will depend on the browser being used.

To Delete Archive Files

1. To delete an archive, select the Delete checkbox next to the archive file in the list. To select all the archive files click on Select All.
2. To delete the selected files, click on Delete Selected.

3.3 Updates

This page displays the different versions of IP Office Application Server operating system files and application files available in the file repository. The file repository locations are configured through the [Settings | General](#) page.

- **Warning**
Before upgrading or changing the version of any installed application or operating system components, you must ensure that you have read the Avaya Technical Bulletins for the IP Office Application Server. The Technical Bulletins will detail supported versions of software and known issues or additional actions required for upgrading.

Application Server Web Control v7.0.2-1 Logged in as webcontrol | Logout | Help | AVAYA

Home Logs **Updates** Settings Windows Clients

Services

Application	Current Version	Latest Available	Status	Actions
webcontrol	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
Watchdog	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
VoiceMail PRO	7.0-5.0	7.0-5.0	out of date	Change Version Update Uninstall
vmpro-wavs-zhh	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall
vmpro-wavs-TTY	-	7.0-5.0	not installed	Change Version Update Install
vmpro-wavs-sv	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall

Update All Check Now

System

OS	CentOS
Version	release 5.5 (Final)
Kernel Version	2.6.18-194.el5
Last Update	-
Status	updates available

Check Now Review Updates Update All

The menu is divided into 2 sections:

- [Services](#) ⁴¹
This section displays the current version of IP Office application service files and whether update files are available.
- [System](#) ⁴²
This section displays the current version of the operating system and whether update files are available.

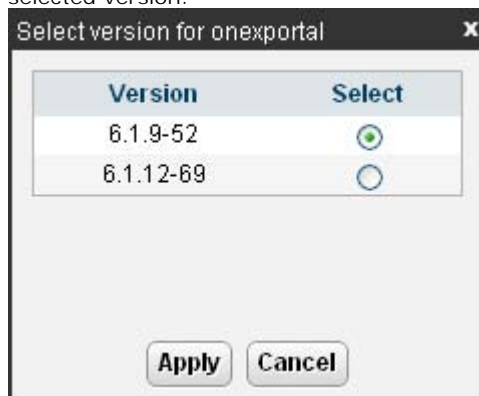
3.3.1 Services

This section shows details of the current version of each application installed and the latest version available.

Application	Current Version	Latest Available	Status	Actions
webcontrol	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
Watchdog	7.0.2-1	7.0.2-1	up to date	Change Version Update Uninstall
VoiceMail PRO	7.0-5.0	7.0-5.0	out of date	Change Version Update Uninstall
vmpro-wavs-zhh	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall
vmpro-wavs-TTY	-	7.0-5.0	not installed	Change Version Update Install
vmpro-wavs-sv	7.0-5.0	7.0-5.0	up to date	Change Version Update Uninstall

Update All Check Now

- The behavior of the Change Version, Update and Update All buttons in the panel are not useable unless appropriate update files are available in the applications [software repository](#)^[32]. This also affects the availability of the Install button option.
- Change Version
Clicking on this button shows the update files available for the related application in the server's [file repository](#)^[32]. The current version is selected. Selecting another version and then clicking Apply will upgrade or downgrade to the selected version.



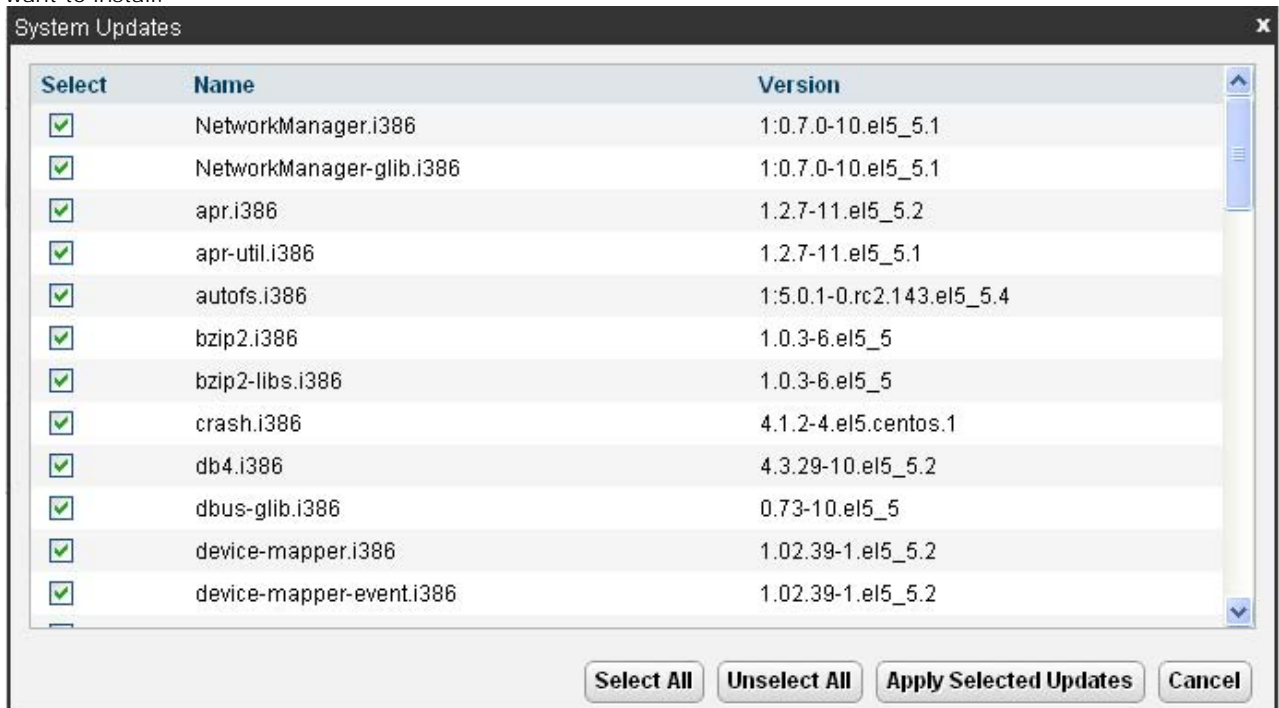
- Update
Clicking on this button will start an update of the related application to the latest available version in the application [file repository](#)^[32].
- Uninstall
Clicking on this button will uninstall the selected application.
 - If there are installation files for the application available in the application [file repository](#)^[32], the button will change to become an Install button.
 - If there are no installation files for the application available in the file repository, the application is no longer listed.
- Install
This button is displayed if an application is uninstalled and update files for the application are available in the file repository.
- Check Now
Clicking this button makes the IP Office Application Server recheck the version of update files available in the file repository. Normally it does this automatically when the Updates page is loaded.
- Update All
If this button is clicked, those applications that support upgrading without being uninstalled (see above) are updated to the latest versions available in the application file repository.

3.3.2 System

This section shows details of the operating system and whether there are updates available.



- **Check Now**
Clicking this button makes the IP Office Application Server recheck the version of update files available in the file repository. Normally it does this automatically when the Updates page is loaded.
- **Review updates**
Clicking this button will display a list of the available update files. This list allows selection of which updates you want to install.



- **Update All**
Clicking this button will install all the available updates without going through the process of selecting with updates to install.

3.4 Settings

This menu has sub-menus for various areas of server configuration and operation.

- [General](#) ^[43]
General server settings such as the locations of software update repositories.
- [System](#) ^[46]
View and manage the server setting for date, time and IP address details.

3.4.1 General

Application Server Web Control v7.0.2-1 Logged in as webcontrol | Logout | Help | **AVAYA**

Home Logs ▲ Updates **Settings** Windows Clients

General System

Software Repositories

Operating System: Local File:

Applications: Local File:

Windows Clients: Local File:

Watchdog

Log files age (days):

SNMP Support

Protocol: TCP UDP

Traps IP:

Traps Port:

Device ID:

System Description:

System Location:

Enable SNMP

Web Control

Application Port:

Protocol:

Backup and Restore

Service	Action
VoiceMail PRO	<input type="button" value="Backup"/> <input type="button" value="Restore"/>

Software Repositories

The IP Office Application Server can use either remote or local software repositories to store software update files. Separate repositories are configured for operating system updates, IP Office application installation files and Windows client files.

The screenshot shows a configuration window titled "Software Repositories" with two tabs: "General" and "System". The "General" tab is selected. The window contains three rows of configuration options:

- Operating System:** A text input field is empty. To its right is a checked checkbox labeled "Local", followed by a "File:" label, an empty text input field, a "Browse..." button, and an "Add" button.
- Applications:** A text input field is empty. To its right is a checked checkbox labeled "Local", followed by a "File:" label, an empty text input field, a "Browse..." button, and an "Add" button.
- Windows Clients:** A text input field contains the URL "http://www.example.com/support/windows". To its right is an unchecked checkbox labeled "Local", followed by a "File:" label, an empty text input field, a "Browse..." button, and an "Add" button.

A "Save" button is located at the bottom right of the window.

The files uploaded or present in the file repositories are used by the [Updates](#) ^[40] and [Windows Clients](#) ^[48] menus.

- **Repository**
If the Local option is not selected, this field is used to set the URL of a [remote HTTP file repository](#) ^[34]. Note that each repository must be different, the same URL must not be used for multiple repositories.
- **Local**
This checkbox is used to set whether the file repository used is local (files stored on the IP Office Application Server or remote (a folder on a HTTP web server specified in the Repository field).
- **File / Browse / Add**
If the Local option is selected, this field and adjacent buttons can be used to browse to a specific update file. When the file is located and selected, click Add to upload the file to the file store on the IP Office Application Server.

Watchdog

- **Log files age (days)**
Sets the number of days that log file records are retained. This does not affect log file [archives](#) ^[39]. Not applied to one-X Portal for IP Office which performs its own log file size limitation.

Web Control

Note that changing any of these settings will require you to login again.

- **Application Port**
Change the port used for logging in. If you change this value you must ensure that you do not set it to a value already used by another service or application.
- **Protocol**
Select the protocol used for connection. The options are http or https.

SNMP Support

The IP Office Application Server can send SNMP event trap information to a specified SNMP server.

- **Protocol**
Sets the protocol, TCP or UDP, to be used for the SNMP messages.
- **Traps IP**
Sets the target IP address for the SNMP messages.
- **Traps Port**
Sets the target port for the SNMP messages.
- **Device ID**
Sets the device ID to be used in the SNMP messages
- **System Description**
Sets the system description value included in SNMP messages.
- **System Location**
Sets the system location value included in SNMP messages.
- **Enable SNMP**
This option must be selected to enable SNMP

Backup and Restore

These controls allow you to backup and restore the application settings being used selected IP Office applications.

- Voicemail Pro Server

For the Voicemail Pro server, these controls can only be used to restore an existing backup. Using the Voicemail Pro client, the voicemail server can be configured to perform regular (daily, weekly and or monthly) automatic backups of selected options including messages and prompts. The Voicemail Pro client can also be used to perform an immediate backup. When the Restore button is selected, the backups available in the backup folder (*/opt/vmpro/Backup/Scheduled*) are listed. The backup name includes the date and time and whether the backup was a manual or scheduled backup. When the required backup is selected, clicking OK will start the restoration process. For details refer to the Voicemail Pro client help.

- one-X Portal for IP Office

one-X Portal for IP Office has its own method of backup and restore that can be access through the one-X Portal for IP Offices web client administration.

3.4.2 System

These settings allow the IP address and time settings specified during installation to be changed.

Application Server Web Control v7.0.2-1 | Logged in as webcontrol | Logout | Help | AVAYA

Home | Logs | Updates | **Settings** | Windows Clients

General | **System**

Network

Network Interface: eth0

Host Name: APSDVD

Use DHCP

IP Address: 192.168.0.3

Subnet Mask: 255.255.255.0

Default Gateway:

DNS: 192.168.0.1

Automatically obtain DNS from provider

Save

Datetime

Date: 2010-16-09

Time: 21 : 26

Timezone: Europe/London

Enable Network Time Protocol

NTP Servers: 0.centos.pool.ntp.org
1.centos.pool.ntp.org
2.centos.pool.ntp.org

Synchronize system clock before starting service

Use local time source

Save

Network

- **Network Interface**
If the server PC has multiple ethernet interfaces, this drop down allows selection of which of the interfaces is currently being configured by the web form.
- **Host Name**
Sets the host name that the IP Office Application Server should use. This setting requires the local network to support a DNS server.
- **Use DHCP**
If selected, the IP address, subnet mask and default gateway information is obtained by the server making DHCP requests. The related fields are greyed out and cannot be set manually, instead they show the values obtained in response to the DHCP request.
- **IP Address**
Displays the IP address set for the server. If DHCP is not being used, the field can be edited to change the setting.
- **Subnet Mask**
Displays the subnet mask applied to the IP address. If DHCP is not being used, the field can be edited to change the setting.
- **Default Gateway**
Displays the default gateway settings for routing. If DHCP is not being used, the field can be edited to change the setting.
- **DNS**
Enter the address of the primary DNS server. This option is greyed out if the address of the DNS server is set to be obtained from the DHCP server (see below).
- **Automatically obtain DNS from provider**
This setting is only used if Use DHCP is also selected. If selected, the server will attempt to obtain DNS server details from the DHCP server.

Date Time

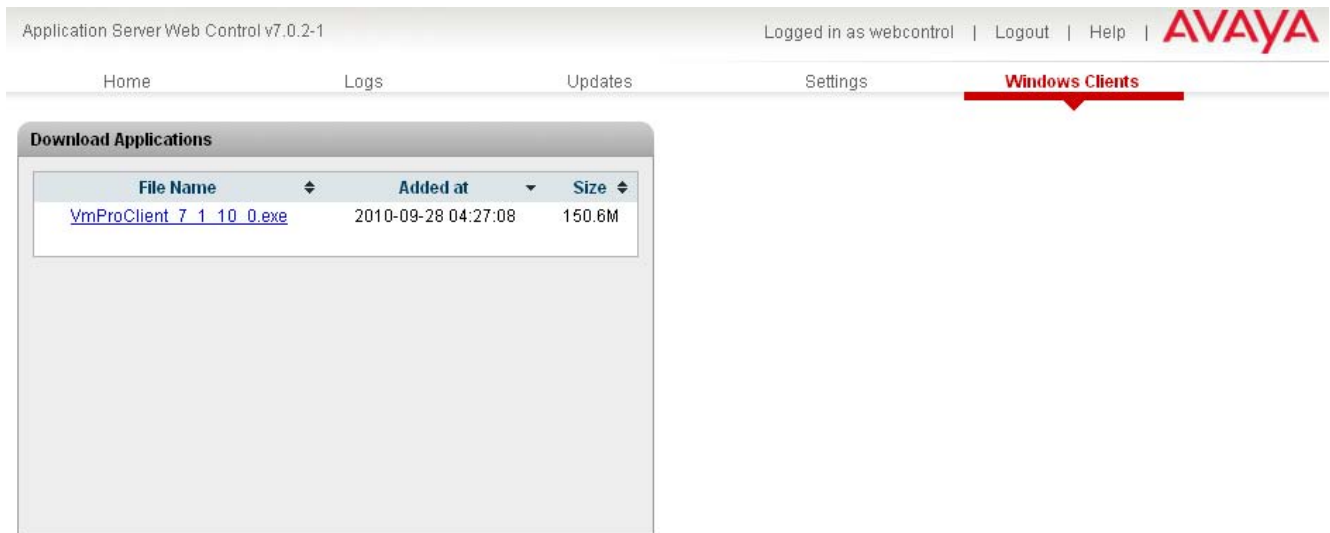
These settings are used to set or obtain a UTC date and time value for use by the IP Office Application Server and services.

- **Date**
Shows the current date being used by the server. If Enable Network Time Protocol is selected, this is the date obtained from the NTP server and cannot be manually changed.
- **Time**
Shows the current UTC time being used by the server. If Enable Network Time Protocol is selected, this is the time obtained from the NTP server and cannot be manually changed.
- **Timezone**
In some instances the time displayed or used by a function needs to be the local time rather than UTC time. The Timezone field is used to determine the appropriate offset that should be applied to the UTC time above.
- **Enable Network Time Protocol**
If this option is selected, the IP Office Application Server will attempt to obtain the current UTC time from the NTP servers listed in the NTP Servers list below. It will then use that time and make regular NTP requests to update the date and time. The following options are only used if Enable Network Time Protocol is selected.
 - **NTP Servers**
This field is used to enter the IP address of an NTP server or servers which should be used when Enable Network Time Protocol is selected. Enter each address as a separate line. The network administrator or ISP may have an NTP server for this purpose. A list of publicly accessible NTP servers is available at <http://support.ntp.org/bin/view/Servers/WebHome>, however it is your responsibility to make sure you are aware of the usage policy for any servers you choose. Choosing several unrelated NTP servers is recommended in case one of the servers you are using becomes unreachable or its clock is unreliable. The operating system uses the responses it receives from the servers to determine which are reliable.
 - An IP Office Release 6.1+ systems can also use NTP to obtain its system time. Using the same servers for the IP Office Application Server and IP Office system is recommended.
 - **Synchronize system clock before starting service**
When using NTP, the time obtained by the operating system is used to gradually change the server PCs hardware clock time. If this option is selected, an immediate update of the server PC clock to match the NTP obtained time is forced.
 - **Use local time source**
When using NTP, the time obtained by the operating system is used to gradually change the server PCs hardware clock time. If this option is selected, the PCs hardware clock time is used as the current time rather than the NTP time.

3.5 Windows Clients

This page is used to download files for use on the local PC. For example the Voicemail Pro client used to administer the Voicemail Pro server application.

The file repository location is configured through the [Settings | General](#) page.



The screenshot shows the Avaya Application Server Web Control interface. At the top, it displays "Application Server Web Control v7.0.2-1" and "Logged in as webcontrol | Logout | Help | AVAYA". Below this is a navigation menu with "Home", "Logs", "Updates", "Settings", and "Windows Clients" (which is highlighted with a red arrow). The main content area is titled "Download Applications" and contains a table with the following data:

File Name	Added at	Size
VmProClient 7 1 10 0.exe	2010-09-28 04:27:08	150.6M

Chapter 4.

Additional Processes

4. Additional Processes

This section details processes that are not normally required but may be useful. These should only be attempted if you are confident with Linux commands and managing a Linux based system.

- [Changing the Root Password](#) ⁵⁰
- [SSH File Transfers](#) ⁵¹
- [Command Line Controls](#) ⁵²
- [Windows to Linux Voicemail Transfer](#) ⁵⁷

4.1 Changing the Root Password

The password for the Linux root user account is specified during the IP Office Application Server software installation. It may be a requirement to change the root user password.

1. Login to the system's command line interface using the existing root user password. This can be done either directly on the server or remotely using an SSH client shell application.
 - If logging in at the IP Office Application Server PC:
 - a. At the Command: prompt, enter login.
 - b. At the login: prompt enter webcontrol.
 - c. At the Password: prompt, enter the password (the default is *web*).
 - If logging in remotely:
 - a. Start your SSH shell application and connect to the IP Office Application Server PC. The exact method will depend on the application being used.
 - The Host Name is the IP address of the IP Office Application Server.
 - The User Name is *webcontrol*.
 - The Protocol is *SFTP/SSH*.
 - The Port is *22*. If this is the first time the application has connected to the server, accept the trusted key.
 - b. If this is the first time the application has connected to the IP Office Application Server, accept the trusted key.
 - c. When prompted, enter the webcontrol user [password](#) ²⁴, the default is *web*.
2. Enter admin. At the password prompt enter the admin password, the default is Administrator. The prompt should change to *Admin>*.
3. Enter root. At the password prompt, enter the current root user password.
4. The prompt should have changed to something similar to *root@APPSDVD ~]#*, indicating that you are now logged in as the root user. You can now change the password used for the root user.
 - a. Enter passwd.
 - b. When prompted, enter the new password.
 - c. When prompted, reenter the new password.
 - d. The command line will indicate if the password has been successfully changed.
5. Enter *logout*. If you accessed the server remotely, log out of the admin session by entering logout again.

4.2 SSH File Transfers

The directory structure of files on the server can be accessed using any file transfer tool that supports SFTP/SSH. For example WS_FTP or SSH Secure Shell.

1. Start your SFTP or SSH file application and connect to the IP Office Application Server PC. The exact method will depend on the application being used.
 - a. Enter the details for the IP Office Application Server server.
 - The Host Name is the IP address of the IP Office Application Server.
 - The User Name is *webcontrol*.
 - The Protocol is *SFTP/SSH*.
 - The Port is *22*. If this is the first time the application has connected to the server, accept the trusted key.
 - b. If this is the first time the application has connected to the IP Office Application Server, accept the trusted key.
 - c. When prompted, enter the webcontrol user [password](#) ^[24], the default is *web*.
2. The default folder displayed after logging in is `/home/webcontrol`.

4.3 Command Line

There are a range of IP Office Application Server commands that can be performed from the server's command line when logged in as the webcontrol user. The commands are grouped into three tiered sets, each set protected by a separate password.

- [General Commands](#) ^[53]
These commands are used mainly to display information about the server and the services it is running. Access to these commands is controlled by the webcontrol user password.
- [Administrator Commands](#) ^[55]
These commands allow you to stop, start, restart and update the services. Access to these commands is controlled by the webcontrol user password and an additional administrator password.
- [Configuration Commands](#) ^[56]
These commands allow you to change server settings. Access to these commands is controlled by the webcontrol user password, the administrator password and an additional configurator password.

1. Log in to the server's webcontrol user account:

- If logging in at the IP Office Application Server PC:
 - a. At the Command: prompt, enter login.
 - b. At the login: prompt enter webcontrol.
 - c. At the Password: prompt, enter the password (the default is *web*).
- If logging in remotely:
 - a. Start your SSH shell application and connect to the IP Office Application Server PC. The exact method will depend on the application being used.
 - The Host Name is the IP address of the IP Office Application Server.
 - The User Name is *webcontrol*.
 - The Protocol is *SFTP/SSH*.
 - The Port is *22*. If this is the first time the application has connected to the server, accept the trusted key.
 - b. If this is the first time the application has connected to the IP Office Application Server, accept the trusted key.
 - c. When prompted, enter the webcontrol user [password](#) ^[24], the default is *web*.

2. You should now be at the > prompt. From this prompt you can perform various [general commands](#) ^[53].

4.3.1 General Commands

In the commands below, *<application>* is replaced with name of the required application: *voicemail*, *onexportal*, *watchdog* or *all*.

At the > prompt, the following commands can be used:

- admin
Change to the [Admin >](#) prompt. The administrator password is required.
- exit
Exit the > prompt. At this level this is the same as logging out.
- help
Display general help on entering commands.
- history
Display the history of commands used in the current session.
- list
Display a list of commands.
- logout
End the session and logout.
- password
Change the webcontrol password.
- show *<application>*
Show information about the application including its current status, version, boot on start setting and any watchdog alarms for the application.


```
> show voicemail
Voicemail Pro is running.
Boot at startup: on.
Version: 6.0.6.19
Watchdog alarms:
[15:24:19 - 21 Apr 2010] Voicemail Pro crashed, restarting.
```
- show logging *<application>*
Show logging information for the application. This includes both audit trail commands, watchdog alarms and the applications own log output.


```
> show logging voicemail
# Last command:
[15:24:19 - 21 Apr 2010] Voicemail Pro starting...
[15:25:00 - 21 Apr 2010] Voicemail Pro started.
# Watchdog alarms:
[15:24:19 - 21 Apr 2010] Voicemail Pro crashed, restarting.
# Voicemail Pro log file:
...
```
- show status *<application>*
Show the status (running, starting or stopped) of the application.


```
> show status voicemail
Voicemail Pro is running.
```
- show updates *<application>*
Show the current version of the application and the versions available in the updates repository.


```
> show updates voicemail
Current Voicemail Pro Version: 6.0.6.19
Available Versions:
- Voicemail Pro 6.0.7.1
- Voicemail Pro 6.0.8.3
- Voicemail Pro 6.0.9.5
```

-
- show time
Show the current date and time on the server.

```
> show time  
Current date and time: 15:30:00 - 21 Apr 2010
```
 - show config
Show a summary of the applications being supported by the IP Office Application Server.

```
> show config  
Services Repository: http://www.avaya.com/support/ipoffice/  
OS Repository: http://www.avaya.com/support/centos/  
Applications Version Boot at startup  
Voicemail Pro: 6.0.20.1, on.  
one-X Portal: 6.0.20.1, off.  
Watchdog: 6.0.6.19, on.  
CLI 6.0.6.1 -  
Operating System: CentOS 5.4  
Kernel version: 2.6.18-92.1.18.el5  
Last updated: 2010-04-27 - 15:30
```
 - top
Return to the `>` prompt.

4.3.2 Administrator Commands

The Admin> prompt is accessed by entering *admin* at the [> general command prompt](#) ^[53] and then entering the administrator password (the default password is *Administrator*).

In the commands below, *<application>* is replaced with name of the required application: *voicemail*, *onexportal*, *watchdog* or *all*.

At the Admin> prompt, the following commands can be used:

- **auditlog**
Display a log of application commands executed.
- **configure**
Change to the [Configure>](#) ^[56] prompt. The configurator password is required.
- **exit**
Exit the Admin> prompt and return to the [> prompt](#) ^[53].
- **forcestop <application>**
Stop the specified application. This is a forced shutdown of the application. For a polite shutdown use the stop command.
- **help**
Display general help on entering commands.
- **history**
Display the history of commands used in the current session.
- **list**
Display a list of commands.
- **logout**
End the session and logout.
- **password**
Change the administrator password required to access the Admin> prompt.
- **restart <application>**
Restarts specified application.
- **root**
Access the root user account. The root user password is required.
- **start <application>**
Start the specified application.
- **stop <application>**
Stop the specified application. This is a controlled shutdown of the application. The command prompt is redisplayed once the application is stopped. To force a shutdown of an application user forcestop.
- **top**
Return to the [>](#) ^[53] prompt.
- **update <application> <version>**
Begin an update of the specified application to a specified version. The versions available for upgrade can be shown using the show updates *<application>* command. In addition to the standard applications, *c//* can also be specified.

4.3.3 Configuration Commands

The Configure> prompt is accessed by entering configure at the [Admin> prompt](#) ^[55] and then entering the configurator password (the default password is *Configurator*).

In the commands below, *<application>* is replaced with name of the required application: *voicemail*, *onexportal*, *watchdog* or *all*.

At the Configure> prompt, the following commands can be used:

- `autostart <application> <on/off>`
Change the autostart settings of an application.
- `backup <application>`
Backup the application. This command is currently only supported for the *onexportal* application.
- `exit`
Exit the Configure> prompt and return to the [Admin>](#) ^[55] command prompt.
- `help`
Display general help on entering commands.
- `history`
Display the history of commands used in the current session.
- `list`
Display a list of commands.
- `logout`
End the session and logout.
- `password`
Change the configuration password required to access the Configure> prompt.
- `repository <type> <link>`
Set the location for the updates repository.
 - The *<type>* value indicates the repository:
 - `os`
Operating system repository.
 - `services`
Applications repository.
 - The *<link>* value indicates the repository location.
- `restore <application>`
Restore an application. This command is currently only supported for the *onexportal* application.
- `startup <application> <on/off>`
Set the start on boot up setting for an application.
- `top`
Return to the `>` ^[53] prompt.

4.4 Windows to Linux Voicemail Transfer

You can transfer a set of Voicemail Pro backup files from a Windows based voicemail server to a Linux based voicemail server.

1. On the Windows voicemail server:
 - a. Using the Voicemail Pro client, perform an immediate backup on the Windows voicemail server.
 - b. This will create a backup folder, the name of which includes the date and time of the backup and Immediate. For example *VMPro_Backup_26012011124108_Immediate*. The default path for such folders is *C:\Program Files\Avaya\IP Office\Voicemail Pro\Backup\Scheduled*.
 - c. Within Windows, locate the folder just created by the backup and copy the folder to the PC with your SSH file transfer tool.
 - d. It may be easier to rename the backup folder, for example replace the *..._Immediate* part with *..._Windows*.
2. Connect to the server using a [SSH File transfer tool](#).
3. Copy the Windows backup folder into the folder */opt/vmpro/Backup/Scheduled/OtherBackups*.
4. Using a web browser, login to the IP Office Application Server server.
5. Select Settings.
6. On the General tab, select the Voicemail Pro Restore button. From the list of available backups, select the one just copied onto the server.
7. Click OK.

If you do not allow remote SSH access to the server, files can be transferred from the CD/DVD drive. This requires the contents of the CD or DVD to be mounted as part of the folder structure.

1. Create a CD or DVD with the Windows backup folder on it.
2. Login on the server as the root user.
3. Enter *eject -n*.
4. The response will be something like *eject: device is '/dev/hda'*.
5. Enter *mount /dev/hda /mnt/cdrom*.
6. The contents of the drive are now accessible as part of the file structure in the folder */mnt/cdrom*.
7. Copy the backup folder from */mnt/cdrom* to */opt/vmpro/Backup/Scheduled/OtherBackups*. For example:
 - *cp -a -f /mnt/cdrom/VMPro_Backup_26012011124108_Immediate /opt/vmpro/Backup/Scheduled/OtherBackups*
8. The backup can now be restored using the web client.

Index

A

Address
 DNS 27, 46
 IP 27, 46
 Administrator
 Login 16
 Application
 Install 30
 Uninstall 31
 Upgrade 30
 Application Logs 38
 Archive 39
 Audit Log 38
 Auditlog 55
 Autostart 56

B

Backup 43, 56, 57

C

CentOS 8
 Compatibility 8
 Change Password
 Root Password 50
 Web Browser Password 24
 Clients 48
 clish 52
 Compatibility 8
 Configuration
 one-X Portal for IP Office 16
 Voicemail Pro 20

CPU

Usage 37

Create Archive 39

D

Date 29, 46
 Default
 Gateway 27, 46
 Password 14, 23
 DHCP 27, 46
 Disk
 Usage 37
 Disk Space 8
 DNS 27, 46
 Download
 Logs 39
 Windows Clients 48
 DVD Drive 8

F

Forcestop 55

G

Gateway 27, 46
 General 43

H

Hard Disk 8
 Headless 8
 Home 37
 Host Name 27, 46

I

Initial configuration 16
 Install
 Application 30
 IP Office Application Server 10
 Service 30

IP Address 27, 46

IP Office

Check 16
 Select 16

L

Linux 8
 Local 43
 Log Files Age 43
 Logging In 14, 23
 Login
 Administrator 16
 Logs 38
 Application 38
 Archive 39
 Audit 38
 Download 39
 Log Files Age 43

M

Mask 27, 46
 Memory 8
 Usage 37
 Menu
 Download 39
 General 43
 Home 37
 Logs 38
 Logs Download 39
 Logs View 38
 Services 41
 Settings 43
 System 42, 46
 Updates 40
 Updates Services 41
 Updates System 42
 View 38
 Windows Clients 48

N

Network Time Protocol 29, 46
 Notifications 37
 NTP 29, 46

O

one-X Portal for IP Office
 Configuration 16
 Operating System 8

P

Passwd 50
 Password 55, 56
 Change 16
 Root Password 50
 Web Browser Password 24

PC Requirements 8

Port

Web Control 43

Processor 8

R

RAM 8
 Usage 37
 Reboot 26, 37
 Remote Software Repositories 34
 Repositories 34
 Repository 43, 56
 Requirements 8
 Restart 55
 Restore 43, 56, 57

Root 55

S

Server

- NTP 29, 46
- Reboot 26, 37
- Shutdown 26, 37

Service

- Install 30
- Uninstall 31
- Upgrade 30

Services 41

- Start 37
- Starting 25
- Status 37
- Stop 37
- Stopping 25

Settings 43

SFTP 51

Show 53

Shutdown 26, 37

SNMP 43

SNMP Support 43

Software

- Repositories 34

Software Repositories 43

Specification 8

SSH access 51

Start 55

Start Services 37

Startup 56

Status 37

Stop 55

Stop Services 37

Subnet Mask 27, 46

System 42, 46

T

Time

- Timezone 29, 46

U

Uninstall

- Application 31
- Service 31

Update 55

- Services 41
- System 42

Updates

- Services 40
- System 40

Upgrading Applications 30

Usage

- CPU 37
- Disk 37
- Memory 37

V

View Logs 38

Voicemail 57

Voicemail Pro

- Configuration 20
- Limitations 7, 20

W

Watchdog 43

Web Control Port 43

Windows 57

Windows Clients 48

Performance figures and data quoted in this document are typical, and must be specifically confirmed in writing by Avaya before they become applicable to any particular order or contract. The company reserves the right to make alterations or amendments to the detailed specifications at its discretion. The publication of information in this document does not imply freedom from patent or other protective rights of Avaya or others.

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

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

© 2011 Avaya Inc. All rights reserved.