IP Office - Job Aid

Upgrading IP Office Software

Summary

This document looks at various IP Office upgrade processes. These are; upgrading IP Office applications, upgrading IP Office Control Unit and expansion unit software; and upgrading 4600 Series IP telephone software.

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Upgrading IP Office Software

Introduction

WARNING: Copy the Latest IP Office Configuration
Always ensure that you have received and made a copy of the latest configuration from the IP Office system before attempting any upgrade.

WARNING: Do Not Upgrade Over WAN or RAS Links
Upgrading IP Office Control Unit software must only be done from a Manager PC on the same LAN as the IP Office. Do NOT attempt an upgrade across WAN or RAS links. Once the existing software is erased, the IP Office loader cannot communicate over WAN or RAS links to complete the upgrade.

Manager PC IP Address
The PC running IP Office Manager should be given a fixed (static) IP address. This address should be on the same subnet as the IP Office Control Unit with the subnet mask set correctly.

Multiple IP Office Networks
Where several IP Offices are connected in a voice and/or data network they should all be running the same level of software.

Note
The processes in this document are generic upgrade processes only. When upgrading it is your responsibility to check for and refer to any relevant Avaya Technical Bulletins and other instructions relating to the particular upgrade being performed.

Remote Upgrades

Currently direct remote upgrades, that is running Manager from a PC across a WAN or RAS link, are not supported. During the upgrade process the core software is erased. The remaining BOOTP loader software in the IP Office is only able to request new software via a broadcast to the local LAN.

If remote upgrading is required, the recommended solution is to use RAS, dial-up networking and a remote control software package such are PC Anywhere or DameWare. In this case, though RAS is being used, the Manager application is run on a PC on the same LAN as the IP Office. If this approach is adopted, the ability to upgrade core software locally from the Manager PC must be first before attempting future upgrades via RAS remote control access.

1. Upgrading IP Office Application Software

When upgrading an IP Office system from one core software level to another, the recommended process is to upgrade all existing IP Office application software as well. This is done by uninstalling and then reinstalling the software.

The uninstallation process below only removes those files installed during the each applications original installation. Any other files added since (user files, system configurations files, voicemail messages, etc.) are not removed.

1. Open the Windows Control Panel (**Start | Settings | Control Panel**).
2. Select **Add/Remove Programs**.
3. Select the IP Office application suite to be removed, eg. ***IP Office Admin Suite***, ***IP Office User Suite***, ***Voicemail Pro***.
   - If removing **Voicemail Pro**, ensure that you have backed up the existing callflow database first, see "1a. Backing Up the Voicemail Pro Database" on page 4.
4. Click on **Add/Remove**.
5. From the options offered select **Remove**. This process only removes those files installed during the application suites original installation. Any other files added since (user files, system configurations files, voicemail messages, etc.) are not removed.
6. Follow any prompts given during the removal process. Note: The removal of some applications (for example TAPI, Feature Key Server, etc) will require the PC to be rebooted.
7. When the process has completed, select another IP Office suite to remove if necessary.
8. Click on **OK** to finish and close the Control Panel.
9. You can now install the new versions of the application suites.

1a. Backing Up the Voicemail Pro Database

Before removing Voicemail Pro, you should create a backup copy of the callflow database. This will contain any customizations made to the default callflow.

- The ***Root.vmp*** file contains the compiled callflow (created using **Save & Make** Live). This type of file cannot be loaded back into the Voicemail Pro GUI for editing. The editable version of the callflow is stored in the file ***VMData.mdb***.

1. Start the Voicemail Pro GUI.
2. Select **File | Import or Export**.
3. Select **Export call flows** and click on **Next >**.
4. Enter a file path and file name ending in .mdb, for example ***c:\temp\backup.mdb***. Click on **Next >**.
5. Click on **Finish**.
6. You can now remove Voicemail Pro, see "1. Upgrading IP Office Application Software" on page 3.
7. Following installation of the new Voicemail Pro software, the **Import call flows** option (**File | Import or Export**) can be used to reload the backup database.

2. Upgrading Control Unit & Expansion Module Software

WARNING: Do Not Upgrade Over WAN or RAS Links

Upgrading IP Office Control Unit software must only be done from a Manager PC on the same LAN as the IP Office. Do NOT attempt an upgrade across WAN or RAS links. Once the existing software is erased, the IP Office loader cannot communicate over WAN/RAS links to complete the upgrade.

The software for IP Office Control Units and Expansion Units is provided in the form of .bin files. These are normally copied to the Manager application's working directory during installation of Manager.

This table describes the different .bin files.

File	Description
ip401.bin	Core software for IP401 Control Units.
ip403.bin	Core software for IP403 Control Units.
ip406.bin	Core software for IP406 Control Units.
ip412.bin	Core software for IP412 Control Units.
naatm16.bin	Software for Analogue Trunk Expansion Modules.
nadcp-16.bin	Software for Digital Station Expansion Modules.
nadt-16.bin	Software for Digital Terminal Expansion Modules.
nas0-16.bin	Software for S0 Expansion Modules.
nawan3.bin	Software for older 10Mbps WAN3 Modules.
avpots16.bin	Software for Phones Expansion Module (analogue extensions).
ipwan3.bin	Software for 10/100Mbps WAN3 modules supported from IP Office 1.4 onwards.

The following .bin files, also found in the Manager folder, are for Avaya 4600 Series IP telephones. See "3. Upgrading 4600 Series Telephone Software" on page 10

File	Description
ap4602r*x_y*.bin	Boot file software for 4602 Telephones. The ***x_y*** indicates the software level, eg. ***ap4602r1_6.bin***.
bb*xxxxx*.bin	Boot file software for 4600 Series IP Phones.
def*xxryy*.bin	Telephony software for 4602, 4606, 4612 and 4624 telephones. ***xx*** indicates the phone type and ***yy*** the software level, eg. ***def24r1_70.bin***.

2a. Pre-Upgrade Checks

Before proceeding with the upgrade check the following:

1. **Use a direct LAN connection only**
   The upgrade process is only supported between a Manager PC and IP Office units on the same LAN. ***Upgrading is not supported over RAS connections or WAN links.***
   - Ensure that the Manager PC has a fixed (static) IP address.
   - In Manager, select **File | Preferences**. The current setting (shown in bold) should be **255.255.255.255** in order to test broadcast routing between the Manager PC and IP Office. If not, select that setting and then check that Manager can see and receive the configuration from the IP Office being upgraded.
   - Check the Manager's programs working directory is the folder containing the bin files. The directory is shown in the Manager's title bar and can be set using **File | Change Working Directory**.

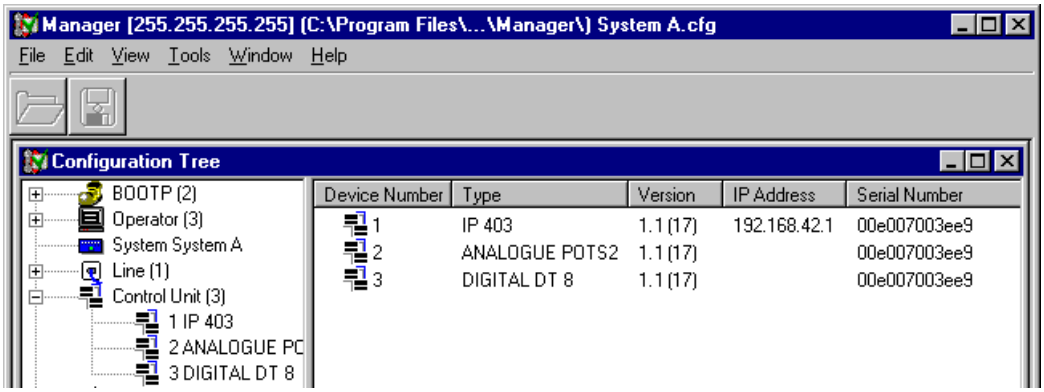
2. **Upgrade the IP Office Admin & User Software Suites if necessary**
   If upgrading between software levels, for example from 1.1 to 1.3, you should also upgrade the IP Office Administration suite of software to match. The new level of .bin software is likely to need the matching level of Manager software to allow access to new configuration fields. See "1. Upgrading IP Office Application Software" on page 3.

3. **Obtain the Bin files**
   If you have upgraded the IP Office Manager application, then the appropriate .bin files are copied to the Manager's working directory (in default ***c:\program files\avaya\ip office\manager***). A set of .bin files can also be found in the \bin folder on the IP Office Administration CD.
   -  **Upgrading IP403 Systems to 2.0**
     IP403 control units must be upgraded to 2.0 in a two stage process. The first stage involves using the ip403.bin file found in the Manager IP403V1_99 sub-folder. Copy this file to the Manager folder and then perform the upgrade. The second stage involves using the ip403.bin file found in the Manager IP403V2_0 sub-folder. Copy this file to the Manager folder and repeat the upgrade.
   - If you have obtained .bin files from another source check that you have a copy of any instructions provided with those bin files and check that the system complies with those instructions. Backup the existing .bin files and then copy the new files into the Manager's Working Directory.

4. **Check the Manager BOOTP Entries**

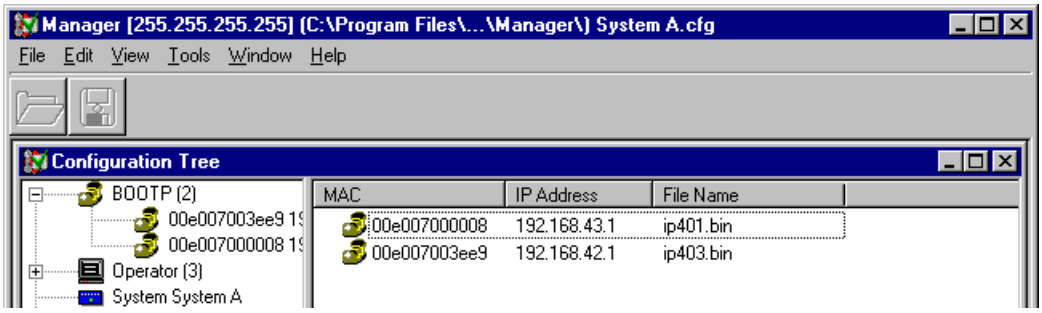
BOOTP is part of the process by which the IP Office restarts and requests new software. The Manager PC acts as the IP Office's BOOTP server and must have a BOOTP entry for the IP Office.

a. In Manager, receive the IP Office's configuration file. Click on **Control Unit** to display a list of units in the system.



b. Device Number 1 is the Control Unit (ie. ***IP401***, ***IP403***, ***IP406*** or ***IP412***). Note its type, software version, IP address and the serial number. The Serial Number is the Control Unit's MAC address.

c. Click on **BOOTP** to display a list of BOOTP entries. There should be one for every IP Office ever configured from the Manager PC. Check that the list includes the MAC and IP address of the Control Unit you want to upgrade and that the .bin file listed matches the Control Unit's type.



d. If an entry does not exist right-click on the displayed list and select **New**. Enter the required details and click on **OK**. You do not need to send the configuration back to the IP Office as BOOTP entries are stored on the Manager PC.

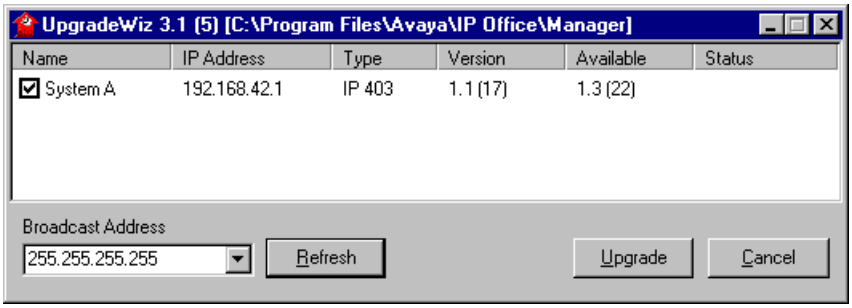
e. ***Double-check the entry as this is a critical setting for the upgrade process.***

2b. Upgrading Control and Expansion Unit Software

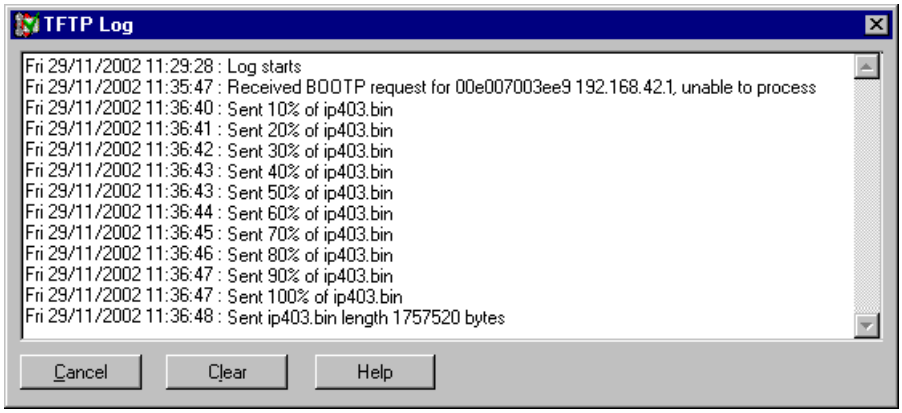
WARNING: Do Not Upgrade Over WAN or RAS Links

Upgrading IP Office Control Unit software must only be done from a Manager PC on the same LAN as the IP Office. Do NOT attempt an upgrade across WAN or RAS links. Once the existing software is erased, the IP Office loader cannot communicate over WAN/RAS links to complete the upgrade.

1. Ensure that you have followed the Pre-Upgrade Checks. See page 6.
2. Ensure that you have received and made a copy of the IP Office's configuration. If the upgrade fails the current configuration may be erased so a backup copy is an essential precaution.
3. In Manager, select **File | Advanced | Upgrade**. This starts the UpgradeWiz application.



4. After a few seconds the wizard should list the Control Units and Expansion Modules found.
   - **No Units Listed**
     If this occurs using the **Broadcast Address** of ***255.255.255.255*** it implies that the Manager PC is not on the same LAN as the IP Office. You should not continue if this is the case.
5. The list shows the current software level of the units and the level of the appropriate bin file it has available for each unit from those in the Manager's working folder.
6. Tick the boxes for those units that you want to upgrade.
7. In Manager select **View | TFTP Log**. This will allow you to see the file transfer processes. Arrange the windows so that you can see both the TFTP Log and the UpgradeWiz.
8. In the UpgradeWiz click on **Upgrade**.
9. You will be asked to enter the **System Password**.
10. The process of erasing, downloading and installing will begin.
11. An example TFTP log for a successful upgrade is shown below. Refer to "2c. Troubleshooting" on page 9 if any other messages are shown.



12. Following the upgrade the IP Office Control Unit should return to normal operation.

2c. Troubleshooting

If the IP Office does not reboot after the upgrade or goes into a reboot loop, then the upgrade has not been successful.

Some clues as to the cause may be given by the entries in the TFTP Log that was running during the upgrade process.

1. **Unable to Send**
   The following or similar in the TFTPLog indicates that the required .bin file was not in the Manager's Working Directory.

```
: Received BOOTP request for 00e007000123 192.168.42.1 ip403.bin
: Sending BOOTP response for 00e007000123 192.168.42.1 ip403.bin
: Unable to send ip403.bin length 0 bytes
```

   - If this occurs check the setting for Manager's Working Directory (**File |Change Working Directory**). Then check that the file detailed by the BOOTP entry is in that folder. A set of .bin files is also available in the \bin folder on the IP Office Administration CD. Then remove and reapply power from the IP Office to force a reboot attempt.

2. **Unable to Process**
   The following or similar in the TFTPLog indicates that a matching BOOTP entry was not found.

```
: Received BOOTP request for 00e007000123 192.168.42.1 ip403.bin, unable
to process
```

   - If this occurs use Manager to add or edit the required BOOTP entry. Then remove and reapply power from the IP Office to force a reboot attempt.

If these actions do not resolve the issue, the IP Office will have to be reset via the DTE port. For details refer to the Job Aid "DTE Port Maintenance".

3. Upgrading 4600 Series Telephone Software

WARNING: 4600 Telephone Software

Only 4600 Series phone software provided as part of the IP Office Manager application should be used with 4600 Series IP phones installed on an IP Office system.

When a 4600 Series phone restarts, it tries to connect to its TFTP server (IP Office Manager) and download 46XXupgrade.scr. If successful it compares the files listed in 46XXupgrade.scr with those it has installed. If they differ it requests the new files. During this process the phone may restart several times as it loads each file and then rechecks for further files.

New versions of IP Office software may support different versions of 4600 Series phone software. If that is the case, the new 4600 software files are included as part of the new IP Office Manager application.

If the 4600 Series phones were installed using the recommend method then upgrading is automatic. De-installing the previous Manager and installing the new Manager updates 46XXupgrade.scr and the 4600 Series software files in Manager's working directory. Upgrading and then rebooting the IP Office causes the 4600 Series phones to restart, request 46XXupgrade.scr and then start their own upgrade process.

The most likely reason for the automatic upgrade not to occur is if the IP address of the PC running Manager no longer matches the **TFTP Server IP Address** set in the IP Office configuration. This may occur is the Manager PC obtains its IP address via DHCP. Thus we recommend that the Manager PC is always given a fixed IP address.

Checking What Software a 4600 Series Phone Has Installed

The software currently loaded in an 4600 Series IP phone can be checked.

1. With the handset on-hook, dial **HOLD 8 4 3 9 #** (**VIEW #**).
2. Press ***** to step through the different phone details (the details vary between software releases). One of these details will be the software file the phone has currently loaded. For example "def24r1_70.bin" would appear on 4624 running 4600 Series Level 1.7 software.

Manually Upgrading 4600 Series Phones

If after upgrading IP Office Manager and the IP Office control unit, you suspect that the 4600 Series phones have not loaded their new software, use the following process:

1. Start IP Office Manager and load the IP Office configuration.
2. In Windows, select **Start | Run** and enter **cmd**. This start the Windows command prompt. Enter **winipcfg** (Windows 95/98) or **ipconfig** to display the Manager PC's current IP address settings.
3. In Manager open the **System** form and on the **System** tab check that the **TFTP Server IP Address** matches the Manager PC's IP address.
   - If they don't match, alter the address in the configuration. Send the configuration to the IP Office and reboot.
   - If they do match, select **File | Advanced | Reboot**.
4. Select **View | TFTP Log** to display the progress of the reboot.
5. Eventually the TFTP log should show a request for the 46xxupgrade.scr file and the file being sent to the requesting phone.
6. What happens now depends on whether the files listed in the 46xxupgrade.scr file match those the phone already has loaded. If they differ, the 4600 Series phones start their upgrade process.