

Upgrading Linux-Based IP Office Servers to IP Office R11.1

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Chapter 1: Upgrading pre-R11.1 SP1 IP Office systems to R11.1

This document details the non-standard upgrade processes that you must use when upgrading Linux-based IP Office servers from pre-R11.1 to R11.1 or higher. You must use these non-standard processes due to the change of Linux operating system from CentOS 6 to CentOS 7.

You must use the processes in this document for all types of Linux-based IP Office server, including IP Office Application Servers and Unified Communications Module modules. These are one-off processes, for further upgrades within R11.1 you can use the standard iso file upgrade processes.

Software Versions

This document uses the latest software versions available at the time of writing. However, if later versions are available when upgrading, use those versions as they can have changes relating to the upgrade process. That is, use the latest R11.0.4.x service pack and the latest R11.1.x service or feature pack.

IP500 V2 Control Units

The processes in this document do not apply to IP500 V2 control units.

Related links

<u>Summary of the upgrade process</u> on page 4
<u>Upgrading a network of IP Office servers</u> on page 6
<u>Media Manager considerations on page 7</u>

Summary of the upgrade process

The following is a summary of the upgrade process:

Step	Action	Notes	
1.	Understand and plan for the upgrade	Read this document in full and understand all the requirements before taking any other actions.	
		For IP Office systems hosting Media Manager, see Media Manager considerations on page 7.	
		IP Office R11.1 does not use Windows servers to host its services. If using any such servers, for example for Avaya one-X® Portal for IP Office or Voicemail Pro, they must be replaced with Linux-based servers. See Windows Server migration on page 44	
2.	Back up the server(s)	Before upgrading to R11.0.4.8, back up the IP Office servers and services.	
3.	Upgrade to the latest R11.0.4 service pack	Upgrade the Linux-based IP Office server(s) to R11.0.4.8 using the standard ISO file transfer methods.	
4.	Verify Correct Operation	After upgrading to R11.0.4.8, verify the operation of all services.	
5.	Backup the server(s)	Before upgrading to R11.1.3, back up all the IP Office servers and services.	
	Upgrade to the latest R11.1 service or feature pack	Proceed with the upgrade from R11.0.4.8 to R11.1.3 using the special one-off upgrade processes in this document.	
	Physical Linux-based IP Office Servers including IP Office Application Servers	This process uses a USB memory key created using the R11.1.3 ISO file.	
		See <u>Upgrading physical Linux-based IP Office servers</u> on page 8.	
	Unified Communications Module	This process uses a USB memory key created using the R11.1.3 ISO file.	
		See <u>Upgrading a Unified Communications Module</u> on page 14.	
	VMware Virtual Machines	This process uses a virtual hard disk (vmdk) file downloaded from Avaya. You can use the file to reboot and upgrade the server.	
		See <u>Upgrading VMware virtual machines</u> on page 18.	
	Hyper-V Virtual Machines	This process uses a virtual hard disk (vhd) file downloaded from Avaya. You can use the file to reboot and upgrade the server.	
		See <u>Upgrading Hyper-V virtual machines</u> on page 23.	
	AWS Instances	This process uses a virtual hard disk (vmdk) file downloaded from Avaya. You can use the file to reboot and upgrade the server.	
		See <u>Upgrading AWS instances</u> on page 27.	
6.	Verify the upgrade	After upgrading to R11.1.3, verify the operation of all services except Media Manager.	
		• If issues are found, see Known upgrade issues on page 33.	

Table continues...

Step	Action	Notes
7.	Restart Media Manager	If the server needs to supports Media Manager, restart the service. This starts the database encryption process.
		You must let Media Manager complete this one-time encryption process. The time required depends on the number of recordings and the server resources and can take several hours.
8.	Update any other servers	

Related links

Upgrading pre-R11.1 SP1 IP Office systems to R11.1 on page 4

Upgrading a network of IP Office servers

When upgrading IP Office servers in a Server Edition or Select network, you must update each Linux-based server in the network using the processes in this document.

- If "Upgrade Available" appears in IP Office Web Manager, do not use that option.
- If the "Consolidate Configuration Entries" menu opens in IP Office Web Manager, cancel the menu.

Recommend Upgrade Order

For a network of IP Office servers, the upgrade process can be approached as follows.

Single Server Upgrades	Simultaneous Server Upgrades
Upgrading servers one at a time allows resiliency support to users from other servers. When upgrading servers one at a time, the recommended upgrade order is: 1. Linux-based IP Office Expansion servers.	If you are confident with the upgrade process, you can run multiple upgrades in parallel using multiple USB upgrade keys or copies of the upgrade wmdk file. However, whilst quicker, this removes the option for resiliency support for features between server.
Secondary server.	
3. Primary server.	
4. IP500 V2 Expansion servers.	

Related links

<u>Upgrading pre-R11.1 SP1 IP Office systems to R11.1</u> on page 4

Media Manager considerations

For IP Office systems hosting Media Manager, special considerations apply for the upgrade to R11.1:

- Prior to IP Office R11.1, call recordings and call details in the recordings database were stored unencrypted. For IP Office R11.1 and higher, they are encrypted. To do that, after the upgrade to R11.1, when Media Manager is restarted it runs an automatic process to encrypted all existing call details in the recordings database.
- This encryption process only needs to run once. Once completed it is not run again.
- The duration of the encryption process depends on the number of call recordings and the server resources. For example, systems with a million call recordings have been seen to take up to 10 hours.
- Any interruptions to the encryption process, for example restarting the Media Manager service or the IP Office server, can cause Media Manager to create a new database with no previous call recording details. Therefore, you must:
 - 1. After upgrading to IP Office R11.0.4.8, include Media Manager in the backup.
 - 2. Before starting the upgrade to IP Office R11.1.3, stop the Media Manager service and disable its auto-start option.
 - 3. After the upgrade to IP Office R11.1.3, restart the Media Manager service. This starts the encryption process.
 - 4. Let the encryption process run until it has completed. You can see the status of the encryption process in the upgrade log files. See <u>Upgrade logs</u> on page 37..
- During the encryption process, call recording of new calls continues as that function is performed separately by the voicemail service.

Related links

Upgrading pre-R11.1 SP1 IP Office systems to R11.1 on page 4

Chapter 2: Upgrading physical Linux-based IP Office servers

This section describes the process for upgrading a physical PC-based IP Office server from IP Office R11.0.4.8 to R11.1.3. This process applies to Server Edition, Select and IP Office Application Servers.

• For Unified Communications Module servers, see <u>Upgrading a Unified Communications</u> <u>Module</u> on page 14.

Related links

Required tools and software on page 8

Upgrade a server PC to IP Office R11.0.4.8 on page 9

Creating a PC-based server USB upgrade key on page 10

Checking the boot order on page 11

Upgrading a PC-based IP Office server to R11.1.3 on page 11

Required tools and software

You need the following tools and software for the upgrade process. Except for Rufus, you can download the software from the Avaya Support site (https://support.avaya.com).

• IP Office R11.0.4.8 server PC ISO file

The iso file name starts with "abe" followed by the version.

Rufus USB creation software

You cannot use the Avaya USB Creator software application for the R11.0.4.8 to R11.1.3 upgrade of PC-based servers. Instead, downloaded and use Rufus from https://rufus.ie/.

• IP Office R11.1.3 server PC ISO file

The iso file name starts with "abe" followed by the version.

256GB+ USB memory key

PC server upgrades require a USB memory key of at least 256GB.

Keyboard, monitor and mouse

Whilst the upgrade process runs automatically following the server reboot, it is useful to see the progress.

Related links

Upgrading physical Linux-based IP Office servers on page 8

Upgrade a server PC to IP Office R11.0.4.8

About this task

The first stage of upgrading to R11.1.3 is to upgrade all IP Office servers to R11.0.4.8:



Marning:

- This process is essential. R11.0.4.8 has changes used by R11.1.3 upgrade process.
- Attempting to upgrade to R11.1.3 or higher from any earlier pre-R11.0 release will fail and cause the lose of data.

Before you begin

- Back up the servers before upgrading to R11.0.4.8. See Creating an IP Office backup on page 38.
- For servers already licensed for R11.0, those licenses are valid for R11.0.4.8 and R11.1.3. Otherwise, obtain a set of licenses for R11.0.

Procedure

- 1. You can upgrade to R11.0.4.8 using the standard iso file transfer methods. However, you must refer to the IP Office technical bulletins and release notes.
- 2. Following the upgrade, test and verify the operation of all services, for example:
 - · Incoming and outgoing calls.
 - Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - · Media Manager if used.

Next steps

- IP Office R11.1 does not use Windows servers to host its services. If using any such servers, for example for Avaya one-X[®] Portal for IP Office or Voicemail Pro, they must be replaced with Linux-based servers. See Windows Server migration on page 44
- See Creating a PC-based server USB upgrade key on page 10.

Related links

Upgrading physical Linux-based IP Office servers on page 8

Creating a PC-based server USB upgrade key

About this task

This process describes how to create a USB memory key for upgrading a PC based IP Office system from R11.0.4.8 to R11.1.3.

• You can use the same USB upgrade key to upgrade multiple R11.0.4.8 servers.



Marning:

 This process erases all existing files and folders on the USB key without any chance of recovery.

Before you begin

Rufus USB creation software

You cannot use the Avaya USB Creator software application for the R11.0.4.8 to R11.1.3 upgrade of PC-based servers. Instead, downloaded and use Rufus from https://rufus.ie/.

• IP Office R11.1.3 server PC ISO file

The iso file name starts with "abe" followed by the version.

256GB+ USB memory key

PC server upgrades require a USB memory key of at least 256GB.

- 1. Insert the USB memory key into a Windows PC.
- 2. Start Rufus.
- 3. Use the **Device** field to select the USB memory key.
- 4. Next to the **Boot selection** field, click **SELECT** and select the ISO file.
 - Ensure that you select the correct ISO file. For PC servers, the file name starts with abe followed by the software version.
- 5. Select the following other options:
 - Volume label: Change this to AVAYA with no quotation marks.
 - File System: Leave this as Large FAT32.
- 6. Click Start.
 - a. The application shows the progress of unpacking the ISO file onto the USB memory key. This takes up to 10 minutes depending on the USB memory key size.
 - b. When Rufus has completed the process and shows "READY", click CLOSE.
- 7. Open the USB memory key in file manager.
 - a. Open the USB folder.
 - b. Copy and paste the awaya autoupgrade.conf and syslinux.cfg files to the root folder of the USB memory key.

Warning:

- Do not copy any other files. Copying any other files will cause the USB to run a new install, erasing all existing files on the server.
- 8. The USB upgrade key is now ready for use.

Next steps

See Checking the boot order on page 11.

Related links

Upgrading physical Linux-based IP Office servers on page 8

Checking the boot order

This upgrade process requires the server PC to boot from the USB upgrade. However, the boot order set in the server PC's BIOS settings can differ.

To add other devices to the boot order, or to change the order of usage, you must change the server's BIOS settings. The method of accessing those settings varies between servers. Refer to the PC manufacturer's documentation.

- Typically, an option to access a server's BIOS settings appears briefly when the server PC is starting. For example, "Press Del for setup".
- Whilst the PC displays its BIOS settings, the boot process stops.
- To boot from a USB memory key, ensure that the USB option is listed before the server's hard disk. If there are multiple USB options, select USB-FDD.
- The server's hard disk must remain in the list of boot devices. The server boots from the hard disk after the software installation.

Next steps

• See Upgrading a PC-based IP Office server to R11.1.3 on page 11.

Related links

Upgrading physical Linux-based IP Office servers on page 8

Upgrading a PC-based IP Office server to R11.1.3

About this task

To upgrade using the USB memory key, use the following process.



Marning:

• Do not use any other method to shut down the server. Doing so will cause the loss of data and settings. This method creates files used by the upgrade process.

Before you begin

- You must upgrade the server to IP Office R11.0.4.8.
- After upgrading to IP Office R11.0.4.8, back up all the servers and services before upgrading to R11.1.3. See <u>Creating an IP Office backup</u> on page 38.

- 1. Shut down the server using the following method:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. If the **Media Manager** service is running, deselect the service's auto-start checkbox and then stop the service.
 - d. Click **Shutdown** and click **Yes**. Wait approximately 90 seconds, after which you will see the services shutting down.
- 2. Connect the monitor, keyboard and mouse to the server.
- 3. Insert the USB upgrade key into the PC's USB port.
- 4. Restart the server.
- 5. When the server has finished upgrading, it automatically switches off.
- 6. Remove the USB upgrade key and restart the server.
- 7. When the server has restarted:
 - a. Check that the version shown is R11.1.3. If not, see Failure to upgrade on page 35.
 - b. Following the upgrade, test and verify the operation of all services:
 - Incoming and outgoing calls.
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - If issues are found, see Known upgrade issues on page 33.
- 8. If the server hosts Media Manager:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. For the **Local Media Manager** service, select the service's auto-start checkbox and then start the service. This starts the Media Manager database encryption process:
 - You must let Media Manager complete this one-time encryption process. The time required depends on the number of recordings and the server resources and can take several hours.
 - Interrupting the encryption process, for example restarting the Media Manager service or the IP Office server, can cause issues.
 - When completed, you can check recordings using the Media Manager menus.

9. If the server is part of a network, continue with the next server.

Related links

<u>Upgrading physical Linux-based IP Office servers</u> on page 8

Chapter 3: Upgrading a Unified Communications Module

This section describes the process for upgrading a Unified Communications Module from IP Office R11.0.4.8 to R11.1.3.

Related links

Required tools and software on page 14

Upgrading a Unified Communications Module to R11.0.4.8 on page 15

Creating a Unified Communications Module USB upgrade key on page 16

<u>Upgrading a Unified Communications Module to R11.1.3</u> on page 17

Required tools and software

You need the following tools and software for the upgrade process. Except for Rufus, you can download the software from the Avaya Support site (https://support.avaya.com).

• IP Office R11.0.4.8 Unified Communications Module ISO file

The iso file name starts with "c110" followed by the version.

Avaya USB Creator

You use this software to create an auto-upgrade USB memory key for a Unified Communications Module.

- You cannot use Avaya USB Creator for the upgrade process if you are using a USB memory key of 64GB or larger. Instead, use Rufus (see <u>Creating a PC-based server USB upgrade key</u> on page 10) with the c110 ISO file.
- IP Office R11.1.3 Unified Communications Module ISO file

The iso file name starts with "c110" followed by the version.

32GB+ USB memory key

Unified Communications Module upgrades require a USB memory key of at least 32GB.

- You cannot use Avaya USB Creator for the upgrade process if you are using a USB memory key of 64GB or larger. Instead, use Rufus (see <u>Creating a PC-based server USB upgrade key</u> on page 10) with the c110 ISO file.
- HDMI monitor and USB keyboard/mouse

Whilst the upgrade process runs automatically after the server reboot, it is useful to see the progress. You must connect the monitor, keyboard, and mouse before the Unified Communications Module restarts.

Windows PC with IP Office R11.1.3 Administration Suite

Related links

Upgrading a Unified Communications Module on page 14

Upgrading a Unified Communications Module to R11.0.4.8

About this task

The first stage of upgrading to R11.1.3 is to upgrade all IP Office servers to R11.0.4.8:



Warning:

- This process is essential. R11.0.4.8 has changes used by R11.1.3 upgrade process.
- Attempting to upgrade to R11.1.3 or higher from any earlier pre-R11.0 release will fail and cause the lose of data.

Before you begin

- Back up the servers before upgrading to R11.0.4.8. See Creating an IP Office backup on page 38.
- For servers already licensed for R11.0, those licenses are valid for R11.0.4.8 and R11.1.3. Otherwise, obtain a set of licenses for R11.0.

Procedure

- 1. You can upgrade the IP Office and Unified Communications Module to R11.0.4.8 using the standard upgrade methods. However, refer to the technical bulletins and release notes for any intermediate releases.
- 2. If the servers are already licensed for R11.0, the same licenses are valid for R11.0.4.8 and R11.1.3. Otherwise, obtain a set of licenses for the servers at R11.0.4.8.
- 3. Following the upgrade, test and verify the operation of all services, for example:
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office

Next steps

See Creating a Unified Communications Module USB upgrade key on page 16.

Related links

Upgrading a Unified Communications Module on page 14

Creating a Unified Communications Module USB upgrade key

About this task

This process describes how to create a USB memory key for upgrading a Unified Communications Module from R11.0.4.8 to R11.1.3.

Before you begin

Avaya USB Creator

You use this software to create an auto-upgrade USB memory key for a Unified Communications Module.

- You cannot use Avaya USB Creator for the upgrade process if you are using a USB memory key of 64GB or larger. Instead, use Rufus (see <u>Creating a PC-based server USB upgrade key</u> on page 10) with the c110 ISO file.
- IP Office R11.1.3 Unified Communications Module ISO file

The iso file name starts with "c110" followed by the version.

32GB+ USB memory key

Unified Communications Module upgrades require a USB memory key of at least 32GB.

- You cannot use Avaya USB Creator for the upgrade process if you are using a USB memory key of 64GB or larger. Instead, use Rufus (see <u>Creating a PC-based server USB upgrade key</u> on page 10) with the c110 ISO file.

- 1. Download and install Avava USB Creator.
- 2. Insert the USB memory key into the Windows PC.
- 3. Start Avaya USB Creator.
- Select the Unified Communications Module R11.1.3 ISO file. For a Unified Communications Module, the file name starts with "c110" followed by the software version.
- 5. Select the USB memory key.
- 6. Set the installation mode to **UCM Auto Upgrade**.
- 7. Select the voicemail prompt languages to include. Ensure that this includes the languages already used by the voicemail service.
- 8. Click Start.
- 9. The progress of the unpacking of the ISO file onto the USB memory key is takes up to 10 minutes depending on the USB memory key size.
- 10. When the application shows "USB Creation Complete", close the application and remove the USB upgrade key.

Next steps

See Upgrading a Unified Communications Module to R11.1.3 on page 17.

Related links

Upgrading a Unified Communications Module on page 14

Upgrading a Unified Communications Module to R11.1.3

About this task

To install software from the USB memory key, use the following process.

Before you begin

- You must upgrade the server to IP Office R11.0.4.8.
- After upgrading to IP Office R11.0.4.8, back up all the servers and services before upgrading to R11.1.3. See Creating an IP Office backup on page 38.

Procedure

- 1. Connect a monitor to the Unified Communications Module using the HDMI cable.
- 2. Connect to the IP Office using System Status Application. Select **System > UC Modules** and select the module. The page shows the module status and other information.
- 3. Insert the USB upgrade memory key into the module's upper USB port.
- 4. In System Status Application, click on **Shutdown**.
- 5. When the module has shut down, click the **USB Boot** button.
- 6. After up to 2 minutes initializing, the module boots using the files on the USB memory key. The HDMI monitor will show the progress of the software installation. The process takes approximately 95 minutes after which the Unified Communications Module automatically restarts.
- 7. The software installation is complete when System Status Application shows the status "Operational".
- 8. Wait for the modules Status to change from "Applications Starting" to "Operational". This takes up to 10 minutes.
- 9. Check the status and operation of the Unified Communications Module services (voicemail, Avaya one-X® Portal for IP Office).

Related links

Upgrading a Unified Communications Module on page 14

Chapter 4: Upgrading VMware virtual machines

The processes in this section cover the upgrading of VMware virtual machines from IP Office R11.0.4.8 to R11.1.3.

Related links

Required tools and software on page 18

Upgrading to R11.0.4.8 on page 18

Uploading and copy the VMDK file on page 19

Upgrading a VMware virtual machine to R11.1.3 on page 20

Required tools and software

You need the following tools and software for the upgrade process. Except for Rufus, you can download the software from the Avaya Support site (https://support.avaya.com).

• IP Office R11.0.4.8 server PC ISO file

The iso file name starts with "abe" followed by the version.

R11.1 upgrade VMDK file

You add this file to the virtual machine as an additional drive. When the virtual machine reboots from this drive, it upgrades the virtual machine to R11.1.3.

Related links

Upgrading VMware virtual machines on page 18

Upgrading to R11.0.4.8

About this task

The first stage of upgrading to R11.1.3 is to upgrade all IP Office servers to R11.0.4.8:



Warning:

• This process is essential. R11.0.4.8 has changes used by R11.1.3 upgrade process.

 Attempting to upgrade to R11.1.3 or higher from any earlier pre-R11.0 release will fail and cause the lose of data.

Before you begin

- Back up the servers before upgrading to R11.0.4.8. See <u>Creating an IP Office backup</u> on page 38.
- For servers already licensed for R11.0, those licenses are valid for R11.0.4.8 and R11.1.3. Otherwise, obtain a set of licenses for R11.0.

Procedure

- 1. You can upgrade to R11.0.4.8 using the standard iso file transfer methods. However, you must refer to the IP Office technical bulletins and release notes.
- 2. Following the upgrade, test and verify the operation of all services, for example:
 - · Incoming and outgoing calls.
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - · Media Manager if used.

Next steps

See <u>Uploading and copy the VMDK file</u> on page 19.

Related links

<u>Upgrading VMware virtual machines</u> on page 18

Uploading and copy the VMDK file

About this task

This process uploads the upgrade <code>vmdk</code> file to the VMware datastore used by the IP Office virtual machine.

- 1. Login to the VMware platform hosting the virtual machine.
- 2. Using the datastore browser, upload the upgrade vmdk to a folder on the datastore:
 - a. Select the datastore hosting the virtual machine(s).
 - b. Create a new folder by clicking the add folder icon. Do not use folder holding the virtual machine's vmx and vmdk files.
 - c. Click on the 🔄 upload icon. If prompted to install the client integration plug-in, follow the instructions and then click on the upload icon again. Select the upgrade vmdk file and upload it to the new folder.

- 3. Copy the upgrade vmdk file to the first virtual machine that needs upgrading. The process of copying within VMware expands the size of the vmdk file from 4.5GB to 200GB. You cannot use the file for upgrading until you have expanded it.
 - a. Select the uploaded upgrade vmdk file and click on the lace copy icon.
 - b. Browse to the datastore folder of the virtual machine and click **OK**.
 - c. Wait until the process displays "Complete". Note: The process also displays "100%" when nearly finished, however you must wait until it shows "Complete".

Next steps

• See Upgrading a VMware virtual machine to R11.1.3 on page 20.

Related links

Upgrading VMware virtual machines on page 18

Upgrading a VMware virtual machine to R11.1.3

About this task

This process boots the virtual machine from the copied VMDK upgrade file. The boot process backs up the server and then upgrades its components to R11.1.3 before restoring the server data.



Warning:

• Do not use any other method to shut down the server. Doing so will cause the loss of data and settings. This method creates files used by the upgrade process.

Before you begin

- You must upgrade the server to IP Office R11.0.4.8.
- After upgrading to IP Office R11.0.4.8, back up all the servers and services before upgrading to R11.1.3. See Creating an IP Office backup on page 38.

- 1. Shut down the server using the following method:
 - Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. If the **Media Manager** service is running, deselect the service's auto-start checkbox and then stop the service.
 - d. Click Shutdown and click Yes. Wait approximately 90 seconds, after which you will see the services shutting down.
- 2. Login to the VMware platform hosting the virtual machine.

- 3. Mount the upgrade vmdk files as a new hard disk for the virtual machine:
 - a. Select the virtual machine and click Edit virtual machine settings.
 - b. On the Virtual Hardware tab, at the bottom set New device to Existing Hard Disk and click Add.
 - c. Browse to the copy of the upgrade vmdk file and select that file.

! Important:

- Do not use the originally uploaded vmdk file. It must be a copy of that file. If upgrading a network of servers, each server can use the same vmdk copy but not simultaneously.
- d. Click **Next** >. Check the settings and click **OK**.
- 4. Adjust the boot order of the virtual machine's hard disks so that it reboots using the upgrade vmdk file:
 - a. Expand the settings of the hard disk.
 - b. Next to **Virtual Device Node**, click on the SCSI setting and select the drive's position in the boot order. SCSI (0:0) is the first drive and the one from which the server boots, SCSI (0:1) the second and so on.
 - c. Click **OK**. and repeat the process for the other drives present.
 - d. When completed, the upgrade vmdk drive is SCSI(0:0), the virtual machine's original drive SCSI(0:1) and, if present, the Media Manager drive SCSI(0:2).
- 5. Click Power on the virtual machine.
- 6. Click **Summary** and then click on the screen image.
- 7. Monitor the upgrade process from the console. When completed, the server automatically switches off.
- 8. Remove the upgrade vmdk file from the virtual machine and reset the drive boot order:
 - a. Select the virtual machine and click **Edit virtual machine settings**.
 - b. Move the cursor to the right of the upgrade hard disk entry. Click the x icon.
 - c. Repeat the process in step 4 to return the remaining drives back to their original boot order. Put the original IP Office drive back to SCSI (0:0) and, if present, the Media Manager drive to SCSI (0:1).
- 9. Restart the virtual server by clicking **Power on the virtual machine**.
- 10. When the server has restarted:
 - a. Check that the version shown is R11.1.3. If not, see Failure to upgrade on page 35.
 - b. Following the upgrade, test and verify the operation of all services:
 - Incoming and outgoing calls.
 - · Voicemail services.

- Avaya one-X[®] Portal for IP Office if used.
- If issues are found, see Known upgrade issues on page 33.
- 11. If the server hosts Media Manager:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. For the **Local Media Manager** service, select the service's auto-start checkbox and then start the service. This starts the Media Manager database encryption process:
 - You must let Media Manager complete this one-time encryption process. The time required depends on the number of recordings and the server resources and can take several hours.
 - Interrupting the encryption process, for example restarting the Media Manager service or the IP Office server, can cause issues.
 - When completed, you can check recordings using the Media Manager menus.
- 12. If the server is part of a network, continue with the next server.
- 13. When satisfied with the operation of the upgraded servers, you can delete the copies of the vmdk file.

Related links

<u>Upgrading VMware virtual machines</u> on page 18

Chapter 5: Upgrading Hyper-V virtual machines

The processes in this section cover the upgrading of Hyper-V virtual machines from IP Office R11.0.4.8 to R11.1.3.

Related links

Required tools and software on page 23
Upgrade Hyper-V to R11.0.4.8 on page 23
Upgrading a Hyper-V virtual machine to R11.1.3 on page 24

Required tools and software

You need the following tools and software for the upgrade process. Except for Rufus, you can download the software from the Avaya Support site (https://support.avaya.com).

• IP Office R11.0.4.8 server PC ISO file

The iso file name starts with "abe" followed by the version.

R11.1 upgrade VHD file

You add this file to the virtual machine as an additional drive. When the virtual machine reboots from this drive, it upgrades the virtual machine to R11.1.3.

Related links

Upgrading Hyper-V virtual machines on page 23

Upgrade Hyper-V to R11.0.4.8

About this task

The first stage of upgrading to R11.1.3 is to upgrade all IP Office servers to R11.0.4.8:



• This process is essential. R11.0.4.8 has changes used by R11.1.3 upgrade process.

 Attempting to upgrade to R11.1.3 or higher from any earlier pre-R11.0 release will fail and cause the lose of data.

Before you begin

- Back up the servers before upgrading to R11.0.4.8. See Creating an IP Office backup on page 38.
- For servers already licensed for R11.0, those licenses are valid for R11.0.4.8 and R11.1.3. Otherwise, obtain a set of licenses for R11.0.

Procedure

- 1. You can upgrade to R11.0.4.8 using the standard iso file transfer methods. However, you must refer to the IP Office technical bulletins and release notes.
- 2. Following the upgrade, test and verify the operation of all services, for example:
 - Incoming and outgoing calls.
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - · Media Manager if used.

Next steps

• See <u>Upgrading a Hyper-V virtual machine to R11.1.3</u> on page 24.

Related links

Upgrading Hyper-V virtual machines on page 23

Upgrading a Hyper-V virtual machine to R11.1.3

About this task

This process boots the virtual machine from the VHD upgrade file. The boot process backs up the server and then upgrades its components to R11.1.3 before restoring the server data.



Warning:

• Do not use any other method to shut down the server. Doing so will cause the loss of data and settings. This method creates files used by the upgrade process.

Before you begin

- You must upgrade the server to IP Office R11.0.4.8.
- After upgrading to IP Office R11.0.4.8, back up all the servers and services before upgrading to R11.1.3. See Creating an IP Office backup on page 38.

- 1. Shut down the server using the following method:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. If the **Media Manager** service is running, deselect the service's auto-start checkbox and then stop the service.
 - d. Click **Shutdown** and click **Yes**. Wait approximately 90 seconds, after which you will see the services shutting down.
- 2. Copy the vhd file to the folder on the Hyper-V platform used to store the virtual disks.
- 3. In Hyper-V Manager, right-click on the virtual machine and select **Connect** to display a console window.
- 4. Click the o icon to stop the virtual machine.
- 5. Select File > Settings.
- 6. If the virtual machine has a virtual disk for Media Manager, click on that drive and change it to IDE Controller 1, Location 0. Click Apply.
- 7. Select the existing main hard disk and change it to IDE Controller 0, Location 1. Click Apply.
- 8. Click **IDE Controller 0** again:
 - a. Select Hard Drive and click Add.
 - b. Check that the Controller is set to IDE Controller 0, Location 0.
 - c. In the **Virtual hard disk** field, browse for the upgrade vhd file and click **Open**. Click **Apply**.
 - d. Click OK.
- 9. Restart the virtual machine by clicking the oicon. The virtual machine reboots from the upgrade vhd file, which starts the process of upgrading the other virtual drives. When completed, the server automatically switches off.
- 10. Reset the virtual drives back to their original boot order:
 - a. Click on the upgrade vhd file and click Remove. Click Apply.
 - b. In the settings of the previous main drive, set the Location of the drive back to IDE Controller 0, Location 0. Click Apply.
 - c. If a Media Manager drive is also present, set it back to IDE Controller 0, Location 1. Click Apply.
 - d. Click OK.
- 11. Restart the virtual machine by clicking the @ icon.

- 12. When the server has restarted:
 - a. Check that the version shown is R11.1.3. If not, see Failure to upgrade on page 35.
 - b. Following the upgrade, test and verify the operation of all services:
 - · Incoming and outgoing calls.
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - If issues are found, see Known upgrade issues on page 33.
- 13. If the server hosts Media Manager:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. For the **Local Media Manager** service, select the service's auto-start checkbox and then start the service. This starts the Media Manager database encryption process:
 - You must let Media Manager complete this one-time encryption process. The time required depends on the number of recordings and the server resources and can take several hours.
 - Interrupting the encryption process, for example restarting the Media Manager service or the IP Office server, can cause issues.
 - When completed, you can check recordings using the Media Manager menus.
- 14. If the server is part of a network, continue with the next server.

Related links

<u>Upgrading Hyper-V virtual machines</u> on page 23

Chapter 6: Upgrading AWS instances

The processes in this section cover upgrading AWS virtual instances from IP Office R11.0.4.8 to R11.1.3.

Related links

Required tools and software on page 27

Upgrading to R11.0.4.8 on page 27

Preparing the AWS upgrade volume on page 28

Upgrading an AWS instance to R11.1.3 on page 30

Required tools and software

You need the following tools and software for the upgrade process. Except for Rufus, you can download the software from the Avaya Support site (https://support.avaya.com).

• IP Office R11.0.4.8 server PC ISO file

The iso file name starts with "abe" followed by the version.

R11.1 upgrade VMDK file

You add this file to the virtual machine as an additional drive. When the virtual machine reboots from this drive, it upgrades the virtual machine to R11.1.3.

AWS Command Line Interface

For a Windows PC, you can run the AWS command line from the Windows command prompt or PowerShell. Refer to https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-welcome.html for details.

Related links

Upgrading AWS instances on page 27

Upgrading to R11.0.4.8

About this task

The first stage of upgrading to R11.1.3 is to upgrade all IP Office servers to R11.0.4.8:

Warning:

- This process is essential. R11.0.4.8 has changes used by R11.1.3 upgrade process.
- Attempting to upgrade to R11.1.3 or higher from any earlier pre-R11.0 release will fail and cause the lose of data.

Before you begin

- Back up the servers before upgrading to R11.0.4.8. See Creating an IP Office backup on page 38.
- For servers already licensed for R11.0, those licenses are valid for R11.0.4.8 and R11.1.3. Otherwise, obtain a set of licenses for R11.0.

Procedure

- 1. You can upgrade to R11.0.4.8 using the standard iso file transfer methods. However, you must refer to the IP Office technical bulletins and release notes.
- 2. Following the upgrade, test and verify the operation of all services, for example:
 - · Incoming and outgoing calls.
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - Media Manager if used.

Next steps

See Preparing the AWS upgrade volume on page 28.

Related links

Upgrading AWS instances on page 27

Preparing the AWS upgrade volume

About this task

This process uploads the upgrade vmdk file to an AWS storage bucket.

Procedure

- 1. If you do not already have one, create an S3 bucket in the same region as the instances:
 - a. In the AWS Management Console, under STORAGE select S3.
 - b. Select Create Bucket and enter a memorable name, for this example "vmdk-ipo".
 - c. Select the **Region** that matches the instances you are upgrading and click **Create**.
- 2. Upload the vmdk file to the bucket:

Click **Upload** and select the vmdk file. Wait until the upload of the file to the bucket has completed.

3. From the AWS command line, create a snapshot from the vmdk file using the following command:

```
aws ec2 import-snapshot --description "INSTALLER" --disk-container 
"Format=VMDK, UserBucket={S3Bucket=vmdk-ipo,S3Key=ABE-upgradedisk.vmdk}"
```

4. Note the ImportTaskID shown in the output.

```
{
"SnapshotTaskDetail": {
"Status": "active",
"Description": "INSTALLER",
"DiskImageSize": 0.0,
"UserBucket": {
"S3Bucket": "demogermany",
"S3Key": "ABE-11.1.100-59-upgradedisk.vmdk"
},
"Progress": "0",
"StatusMessage": "pending"
},
"Description": "INSTALLER",
"ImportTaskId": "import-snap-0c938d492b68484da"
}
```

5. Check the status of snapshot using the following command. Replace the <snap-id> with
 the ImportTaskID value shown in the previous step.

```
aws ec2 describe-import-snapshot-tasks --import-task-ids <snap-id>
```

6. Do not continue until the status in the command output shows as "Completed". For example:

```
{
"ImportSnapshotTasks": [
{
"SnapshotTaskDetail": {
"Status": "completed",
"Description": "INSTALLER",
...
```

- 7. Once the snapshot import has completed, create a volume based on the snapshot:
 - a. Select Elastic Block Storage > Snapshots.
 - b. Select the snapshot and select **Actions** > **Create Volume**.
 - c. For Volume Type, select General Purpose SSD (gp2).
 - d. For Size (GiB), enter 200GB.
 - e. For **Availability Zone**, select the same zone as the instances you are upgrading.

Next steps

See Upgrading an AWS instance to R11.1.3 on page 30.

Related links

Upgrading AWS instances on page 27

Upgrading an AWS instance to R11.1.3

About this task

This process boots the virtual machine from the copied vmdk upgrade file. The boot process backs up the server and then upgrades its components to R11.1.3 before restoring the server data.

Warning:

• Do not use any other method to shut down the server. Doing so will cause the loss of data and settings. This method creates files used by the upgrade process.

Before you begin

- You must upgrade the server to IP Office R11.0.4.8.
- After upgrading to IP Office R11.0.4.8, back up all the servers and services before upgrading to R11.1.3. See Creating an IP Office backup on page 38.

- 1. Shut down the server using the following method:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. If the **Media Manager** service is running, deselect the service's auto-start checkbox and then stop the service.
 - d. Click **Shutdown** and click **Yes**. Wait approximately 90 seconds, after which you will see the services shutting down.
- 2. Check that the server has completed its shutdown:
 - a. In EC2, select **Instances** and select the instance.
 - b. Select **Actions** > **Instance State** > **Stop** and confirm the action.
- 3. The **Description > Block devices** section shows links for the instance's virtual disks; the IP Office drive (/dev/sda1) and a Media Manager drive (/dev/sdb).
- 4. Click on the /dev/sda1 link and then the EBS ID link:
 - a. Note the Volume ID. Click the Name field and give the volume a distinctive name if not already done.
 - b. Click and then select **Actions** > **Detach**.
- 5. If also present, click on the /dev/sdb link. Note the Volume ID and then select Actions > Detach.
- 6. Attach the upgrade volume as the drive from which the instance boots:
 - a. Select Elastic Block Storage > Volumes.
 - b. Select Actions > Attach Volume.
 - c. In the **Instance** field, select the matching instance.

- d. For the **Device**, enter /dev/sda1.
- e. Repeat the process to reattach the original IP Office volume but the **Device** now set to /dev/sdb. You do not need to reattach the Media Manager volume at this stage.
- 7. Restart the instance:
 - a. Select **Instances** and select the instance.
 - b. Select **Actions** > **Instance State** > **Start** and confirm the action.
- 8. The instance boots from the upgrade volume and starts the upgrade process. When the upgrade has finished, the instance automatically switches off. Wait until the instance status shows switched off:
 - Select Instances.
 - b. Locate the instance and verify the Status Checks column shows "Stopped".
- 9. Detach all the current volumes again (the upgrade volume and the original IP Office volumes).
- 10. Reattach the original IP Office volume as /dev/sda1 and, if present, the Media Manager volume as /dev/sdb.
- 11. When the server has restarted:
 - a. Check that the version shown is R11.1.3. If not, see Failure to upgrade on page 35.
 - b. Following the upgrade, test and verify the operation of all services:
 - Incoming and outgoing calls.
 - · Voicemail services.
 - Avaya one-X[®] Portal for IP Office if used.
 - If issues are found, see Known upgrade issues on page 33.
- 12. If the server hosts Media Manager:
 - a. Connect to the server's platform view/web control menus using port 7071.
 - b. On the **System** tab, click **Show optional services**.
 - c. For the **Local Media Manager** service, select the service's auto-start checkbox and then start the service. This starts the Media Manager database encryption process:
 - You must let Media Manager complete this one-time encryption process. The time required depends on the number of recordings and the server resources and can take several hours.
 - Interrupting the encryption process, for example restarting the Media Manager service or the IP Office server, can cause issues.
 - When completed, you can check recordings using the Media Manager menus.
- 13. If the server is part of a network, continue with the next server.
- 14. When satisfied with the operation of the upgraded instance(s), you can delete the upgrade volume.

Upgrading AWS instances

Related links

Upgrading AWS instances on page 27

Chapter 7: Known upgrade issues

The following are known upgrading issues.

Related links

Voicemail call flows missing on page 33

Call recording archiver other than Media Manager on page 33

Media Manager does not start or shows "The list is empty" on page 34

Consolidation warning shown on page 35

"Upgrade Available" shown on page 35

Failure to upgrade on page 35

Voicemail call flows missing

Condition

During the upgrade, the customized call flows are not migrated (the voicemail service .mdb file). However, the original call flows are still present in the editable file used by the Voicemail Pro client (the .vmp file).

Solution

- 1. Connect to the voicemail service using the Voicemail Pro client.
- 2. Check that the customized call flows are present.
- 3. Click Save & Make live.

Related links

Known upgrade issues on page 33

Call recording archiver other than Media Manager

Condition

IP Office R11.1.3 uses Opus file format for new call recordings. Whilst Media Manager supports this, it is not compatible with other call recording archiving solutions such as ACR or XIMA.

Solution

- 1. Using IP Office Web Manager, access the system configuration.
- 2. Select **Applications** > **Voicemail Pro System Preferences** and select the server running the voicemail service.
- 3. If using a call recording archiving solution other than Media Manager, set the **Archive Solution** setting to **External**.
- 4. Click **Update**.
- 5. Restart the IP Office service.

Related links

Known upgrade issues on page 33

Media Manager does not start or shows "The list is empty"

Condition

The Media Manager service does not start or the recordings menu only displays "The list is empty".

Prior to IP Office R11.1, call recordings and call details in the recordings database were stored unencrypted. For IP Office R11.1 and higher, they are encrypted. To do that, after the upgrade to R11.1, when Media Manager is restarted it runs an automatic process to encrypted all existing call details in the recordings database.

Solution

- 1. No action is required. The encryption process run by Media Manager is a one-time process that runs automatically following the IP Office R11.1 upgrade.
 - The time required for completion depends on the number of recordings and resources of the server. For example, systems with over a million recordings have been seen to take up to 10-hours.
 - During this time, call recording continues as that function is performed by the voicemail service. The voicemail service can record up to 20GB (4000 hours of recordings) whilst waiting for Media Manager to complete its encryption process.
- 2. Any interruptions to the encryption process, for example restarting the Media Manager service or the IP Office server, can cause Media Manager to create a new database with no previous call recording details. If you suspect that has happened:
 - a. Restore the Media Manager database from the IP Office R11.0.4.8 backup. Restoring the unencrypted database restarts the database encryption process.

Related links

Known upgrade issues on page 33

Consolidation warning shown

Condition

When upgrading servers in an IP Office network, when accessing the configuration using IP Office Manager or IP Office Web Manager, a request to consolidate the configuration appears.

Solution

- 1. Cancel the consolidation menu and continue with upgrading all servers in the network.
- 2. Upgrading all servers in the network automatically resolves the consolidation issue.

Related links

Known upgrade issues on page 33

"Upgrade Available" shown

Condition

When logged in on IP Office Web Manager after upgrading to R11.1.3, the message Upgrade Available appears next to other servers in the network.

Solution

- 1. Upgrade the other Linux-based server in the network using the upgrade processes in this document.
- Do not use the upgrade options within IP Office Web Manager. They will not upgrade the servers correctly.

Related links

Known upgrade issues on page 33

Failure to upgrade

Condition

The upgrade scripts include checks for certain conditions which if not matched, cause the upgrade process to stop without performing the upgrade.

Cause

Possible causes of the failure to upgrade are:

- If the server starts as normal rather than upgrading:
 - The boot source for the upgrade was not the USB upgrade key. Correct the server's boot settings and reattempt the upgrade.

- If the server automatically shuts down following the upgrade attempt:
 - The system was not running IP Office R11.0.4.8. All upgrades to R11.1.3 must start from R11.0.4.8. When this occurs, the server adds the message "Version found <version> is not 11.0.4.8" to the /logs/backup logs.txt file.
 - The system shut down using a method other than the **Shutdown** button shown in its web control menus.
 - Media Manager has run in the past but was not running when the system shut down. The Media Manager server must be running to back up any previous Media Manager settings and data.

Solution

- 1. Correct the cause of the failure to upgrade above and reattempt the upgrade.
- 2. If the upgrade still fails, collect the logs files before raising a support request. See Upgrade logs on page 37.

Related links

Known upgrade issues on page 33

Chapter 8: Upgrade logs

The upgrade process creates a number of log files. To raise a support ticket, you must obtain those log files.

Logs	Description
USB upgrade key logs	The USB upgrade key/virtual hard disk stores logs for each server it is used to upgrade:
VMDK log files	• /logs/backup_logs.txt
	This file has a record of the back up actions performed by the upgrade scripts.
	• /logs/restore_logs.txt
	This file has a record of the restore actions performed by the upgrade scripts.
Media Manager encryption log	Media Manager creates a log file for the encryption process it starts following the upgrade to IP Office R11.1.3:
	• /opt/MediaManager/log_encrypt_migration.txt
	The file contains:
	- totalRecords N = The total number of records to be updated.
	- tttttt = The time taken in milliseconds.
	- All record updated = Added when the encryption process has finished.
Linux-based server logs	In addition to the logs above, to raise a support ticket you require the following log files:
	• /opt/webcontrol/log/web.log
	• /var/log/rsyslog
	• /opt/MediaManager/MediaManagerService.log
	• /opt/Avaya/apache-tomcat/logs/MediaManager.log
	• The /opt/MediaManager/Backup/mm_back.tar.gz if present.

Chapter 9: Creating an IP Office backup

You must always take a full system backup before any major action such as a system upgrade. Whilst you do not need a backup for the actual upgrade, it is an important provision for system recovery if any issues occur in the upgrade process.

Avaya supports IP Office Web Manager back up/restore between Linux-based IP Office servers using HTTPS, HTTP or SFTP. You can use the following options:

- The Server Edition ISO installed on a non-Avaya PC and ignited as an IP Office Application Server, without enabling the Avaya one-X[®] Portal for IP Office and Voicemail Pro services.
- The IP Office Server Edition OVA file installed in VMware Player on a PC and ignited as an IP Office Application Server.

Related links

Assessing the backup space requirement on page 38

Enabling HTTP support on page 40

Creating a remote server link for backup/restore on page 40

Performing a backup on page 41

Testing restoration on page 42

Deleting existing backups on page 42

Assessing the backup space requirement

When considering a server's suitability as a backup server; you must assess its backup space and the requirements of the servers you want to backup.

The backup server backup quota

The backup server needs a 160GB or larger hard disk. The server calculates the backup quota as follows:

- Backup Quota ≈ (0.8 x HDD Capacity) 92GB if HDD Capacity ≥ 160GB, otherwise zero.
 - For example, for a 500GB hard disk, the backup quota is approximately 308GB.
 - Note that this is approximate. The quoted disk capacity from a disk manufacturer or a virtual server platform differs from the capacity reported by the operating system.

You can check the actual quota available for backups using the process below.

To check a server's backup quota

- 1. Login to the backup server's web manager menus.
- Click and select Platform View.
- On the System tab, note the Quota available for backup data value. Note this is the total space usable for backups, it does not account for the space already used by any existing backups.
- 4. Click **Solution** to exit the platform view.

Estimating the space required for a full backup

The tables below show the space needed for a worst-case full backup. That is, a backup which assumes that all users have used their voicemail mailbox and other facilities to maximum capacity.

The minimum disk size column indicates the hard disk size required to have a sufficiently large backup quota (see above) for at least one full backup.

Table 1: Server Edition/Select Network.

Users	Full backup size	Minimum server disk size
100	35GB	160GB
750	78GB	214GB
1500	127GB	275GB
2000	158GB	320GB
2500	189GB	360GB

Table 2: IP Office Application Server/Unified Communications Module

Voicemail Pro users	Full backup size	Minimum server disk size
20	30GB	160GB
50	32GB	160GB
100	34GB	160GB
150	37GB	165GB

A backup server can, subject to available space, support up to 14 backups where each backup contains details for multiple services on multiple servers in a network.

- When the backup server has 14 backups, any additional backup causes the backup server to delete the oldest previous backup.
- Similarly, if the available backup space is exhausted, the backup server deletes the oldest previous backup to create space.

Related links

Creating an IP Office backup on page 38

Enabling HTTP support

About this task

By default, the Linux-based IP Office servers does not support HTTP for backup/restore. Enabling HTTP removes the requirement to setup certificates for the temporary backup server.

Procedure

- 1. Login to the backup server's web manager menus.
- 2. Click and select Platform View.
- 3. Select **Settings** and then **System**.
- 4. In the HTTP Server section, select Enable HTTP file store for backup/restore.
- 5. Click Save.
- 6. Click **Solution** to exit the platform view.

Related links

Creating an IP Office backup on page 38

Creating a remote server link for backup/restore

About this task

Use the following process to specify the link from the Linux-based IP Office server to the temporary backup server.

Procedure

- 1. Login to IP Office Web Manager on the server.
 - For a server network, do this through the network's primary server.
 - For a Unified Communications Module, browse to the IP Office system IP address and select IP Office Web Manager on UCM.
- 2. Click Solution Settings and select Remote Server.
- 3. Click Add Remote Server.
- 4. Enter the details to match the backup server:
 - a. **Server Name** Enter a name that shows the link's purpose.
 - b. Remote Server Address Enter the IP address or FQDN of the backup server.

Protocol	Port	Remote Path	Credential
SFTP	22	/var/www/html/	Administrator account
		avaya/backup	name and password

Table continues...

Protocol	Port	Remote Path	Credential
HTTPS	5433	/avaya/backup	None
HTTP	8000	/avaya/backup	None

5. Click Save.

Related links

Creating an IP Office backup on page 38

Performing a backup

About this task

Use the following process to back up existing server settings to the backup server.

Before you begin

• Create a link to the backup server. See <u>Creating a remote server link for backup/restore</u> on page 40.

Procedure

- 1. Login to IP Office Web Manager on the server.
 - For a server network, do this through the network's primary server.
 - For a Unified Communications Module, browse to the IP Office system IP address and select IP Office Web Manager on UCM.
- 2. On a primary server, click on the checkbox to select all the servers in the network.
- 3. Click **Actions** and select **Backup**.
- 4. In the **BACKUP CONFIGURATION** section, select the options to backup. The server grays out the options for services that are not running.
- 5. For **Select Remote Server**, select the remote server that was setup for connections to the backup server.
- 6. Click Start.
- 7. When the backup starts, the **Solution** menu shows information about its progress. If the backup is successful, the menu displays Backup complete for each server included.

Related links

Creating an IP Office backup on page 38

Testing restoration

About this task

After performing an IP Office Web Manager backup, test restoration.

Procedure

- 1. Login to IP Office Web Manager on the server.
 - For a server network, do this through the network's primary server.
 - For a Unified Communications Module, browse to the IP Office system IP address and select IP Office Web Manager on UCM.
- 2. On a primary server, click on the checkbox to select all the servers in the network.
- 3. Click **Actions** and select **Restore**.
- 4. For **Select Remote Server**, select the remote server that was setup for connections to the backup server.
- 5. Click **Get Restore Points**. The server requests details of the backups available for the servers selected.
- 6. Within the full backup, highlight all the server sets that you want to restore. Since this a test, select just a single option to restore.
- 7. Click **Restore**.
- Click Yes.
- 9. The **Solution** menu shows the progress of the restoration.

Related links

Creating an IP Office backup on page 38

Deleting existing backups

About this task

A server used as the backup server can store a maximum of 14 backups.

- The space needed for each backup can limit the actual number of backups.
- The system prefixes all files associated with a backup with the number in the format NN_, from 00_ to 13_. Since it reuses the NN_ prefixes, the prefixes do not necessarily match the date order.
- If necessary, you can delete previous backups to increase the available backup space. Verify the prefix to delete by using the restore process to see the list of existing backups. See <u>Test</u> <u>Restoration</u> on page 42.

Marning:

• Only delete files with numeric prefix 00 to 13 . The backup server uses other files in the folder for management of the backup file sets.

Procedure

- 1. Connect to the backup server using an SSH file management client and web manager Administrator account.
- 2. Browse to /var/www/html/avaya/backup folder.
- 3. To delete a backup set, select and delete all files with the same NN file prefix. Do not delete any other files.

Related links

Creating an IP Office backup on page 38

Chapter 10: Windows Server migration

IP Office R11.1 does not support the Windows server based versions of Voicemail Pro and Avaya one-X® Portal for IP Office. For IP Office systems using those products Avaya recommends that they switch to Linux-based versions of those services after upgrading to R11.0.

The options are:

- 1. Install a Unified Communications Module or IP Office Application Server with the Voicemail Pro service enabled.
- 2. Back up the R11.0 Windows Voicemail Pro data using the Voicemail Pro client.
- 3. Restore the data onto the Linux-based R11.1 server (the Unified Communications Module or IP Office Application Server).

Additional Notes

- By default, R11.1 disables access to the voicemail server using the Voicemail Pro client.
 To enable client access, inIP Office Web Manager select Application > Voicemail Pro System Preferences > Enable Voicemail Pro Client Interface.
- 2. There is no process for migration of the Avaya one-X[®] Portal for IP Office settings. If the customer wants to retain any settings such as widgets, you must manually export and then import the widget settings.

Related links

<u>Backing up the Windows voicemail server</u> on page 44 <u>Restoring onto the Linux server</u> on page 45

Backing up the Windows voicemail server

About this task

Using the Voicemail Pro client, on the Windows Voicemail Pro server create an immediate backup.

Procedure

- 1. Open the Voicemail Pro client application and connect to voicemail server.
- 2. From the **Administration** menu, select **Preferences > General**.
- 3. Click the **Backup & Restore** tab.
- 4. Click Backup Now.

- 5. Select all the following settings for a full backup:
 - Voicemails The voice messages received in the user and hunt group mailboxes.
 - User Greetings & Settings The personal and temporary greetings, greeting configuration settings, mailbox configuration settings, outcalling configuration settings, and custom recordings.
 - Campaigns The responses received for campaigns.
 - Callflows, Modules & Conditions The call flows, modules, conditions, and meta information for campaigns.
 - Module Recordings The recordings for the various modules.
 - System Settings The settings like Voicemail Pro settings, COS settings, debug settings, and so on.
- 6. To save the backup files locally, enter a local file path.
- 7. Click **OK** to start the backup. Whilst the backup is in progress, the **Restore & Backup** dialog box displays Abort instead of Backup Now.

Related links

Windows Server migration on page 44

Restoring onto the Linux server

About this task

On a Linux-based voicemail server, you cannot use the Voicemail Pro client to restore previous backups. However, you can copy the backup files to the server and restore them using the web control menus.

Before you begin



Warning:

Close any Voicemail Pro client before restoring

The restoration process requires the voicemail service to restart. That will not occur whilst any Voicemail Pro client is connected to the service.

Procedure

- 1. Connect to the Linux-based server using an SSH File transfer tool.
- 2. Copy the backup folder to the /opt/vmpro/Backup/Scheduled/OtherBackups folder on the Unified Communications Module or IP Office Application Server.
- 3. Using a web browser, login directly to the server's web control menus on port 7071.
- 4. Click **Settings**, and select the **General** tab.
- 5. In the **Backup and Restore** section, click **Restore** for the Voicemail service.

- 6. Select the backup file that you want to restore.
- 7. Click **OK**.

Related links

Windows Server migration on page 44

Chapter 11: Additional Help and Documentation

The following pages provide sources for additional help.

Related links

Additional Manuals and User Guides on page 47
Getting Help on page 47
Finding an Avaya Business Partner on page 48
Additional IP Office resources on page 48
Training on page 49

Additional Manuals and User Guides

The <u>Avaya Documentation Center</u> website contains user guides and manuals for Avaya products including IP Office.

- For a listing of the current IP Office manuals and user guides, look at the <u>Avaya IP Office™</u> Platform Manuals and User Guides document.
- The <u>Avaya IP Office Knowledgebase</u> and <u>Avaya Support</u> websites also provide access to the IP Office technical manuals and users guides.
 - Note that where possible these sites redirect users to the version of the document hosted by the <u>Avaya Documentation Center</u>.

For other types of documents and other resources, visit the various Avaya websites (see Additional IP Office resources on page 48).

Related links

Additional Help and Documentation on page 47

Getting Help

Avaya sells IP Office through accredited business partners. Those business partners provide direct support to their customers and can escalate issues to Avaya when necessary.

If your IP Office system currently does not have an Avaya business partner providing support and maintenance for it, you can use the Avaya Partner Locator tool to find a business partner. See <u>Finding an Avaya Business Partner</u> on page 48.

Related links

Additional Help and Documentation on page 47

Finding an Avaya Business Partner

If your IP Office system currently does not have an Avaya business partner providing support and maintenance for it, you can use the Avaya Partner Locator tool to find a business partner.

Procedure

- 1. Using a browser, go to the Avaya Website at https://www.avaya.com
- Select Partners and then Find a Partner.
- 3. Enter your location information.
- 4. For IP Office business partners, using the Filter, select Small/Medium Business.

Related links

Additional Help and Documentation on page 47

Additional IP Office resources

In addition to the documentation website (see <u>Additional Manuals and User Guides</u> on page 47), there are a range of website that provide information about Avaya products and services including IP Office.

Avaya Website (https://www.avaya.com)

This is the official Avaya website. The front page also provides access to individual Avaya websites for different regions and countries.

Avaya Sales & Partner Portal (https://sales.avaya.com)

This is the official website for all Avaya business partners. The site requires registration for a user name and password. Once accessed, the portal can be customized for specific products and information types that you wish to see and be notified about by email.

Avaya IP Office Knowledgebase (https://ipofficekb.avaya.com)

This site provides access to an online, regularly updated version of IP Office user guides and technical manual.

Avaya Support (https://support.avaya.com)

This site provide access to Avaya product software, documentation and other services for Avaya product installers and maintainers.

- Avaya Support Forums (https://support.avaya.com/forums/index.php)

This site provides a number of forums for discussing issues.

International Avaya User Group (https://www.iuag.org)

This is the organization for Avaya customers. It provides discussion groups and forums.

Avaya DevConnect (https://www.devconnectprogram.com/)

This site provides details on APIs and SDKs for Avaya products, including IP Office. The site also provides application notes for third-party non-Avaya products that interoperate with IP Office using those APIs and SDKs.

Avaya Learning (https://www.avaya-learning.com/)

This site provides access to training courses and accreditation programs for Avaya products.

Related links

Additional Help and Documentation on page 47

Training

Avaya training and credentials ensure our Business Partners have the capabilities and skills to successfully sell, implement, and support Avaya solutions and exceed customer expectations. The following credentials are available:

- Avaya Certified Sales Specialist (APSS)
- Avaya Implementation Professional Specialist (AIPS)
- Avaya Certified Support Specialist (ACSS)

Credential maps are available on the Avaya Learning website.

Related links

Additional Help and Documentation on page 47

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