



# **Administering Avaya IP Office™ Platform Media Manager**

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# Part 1: Introduction

# Chapter 1: IP Office Media Manager

IP Office Media Manager stores and replays audio call recordings generated by Voicemail Pro. It stores recordings on a local drive or cloud-based storage. Media Manager can also archive recordings to additional locations such as DVD, NAS, or cloud-storage.

Media Manager archives and catalogs recordings for administrators and users to search, play, and download when required. All recordings are available to system administrators through Web Manager. Administrator can configure extension users for access to selected recording through the User Portal application.

IP Office only supports Media Manager running on the same server as Voicemail Pro.

- For a network based around a primary server, support Media Manager on the primary server. They do not support Media Manager on the secondary server or any other server in the network.
- For a standalone IP500 V2 system or SCN of IP500 V2 systems, Media Manager is supported on the same IP Office Application server hosting Voicemail Pro for the network.

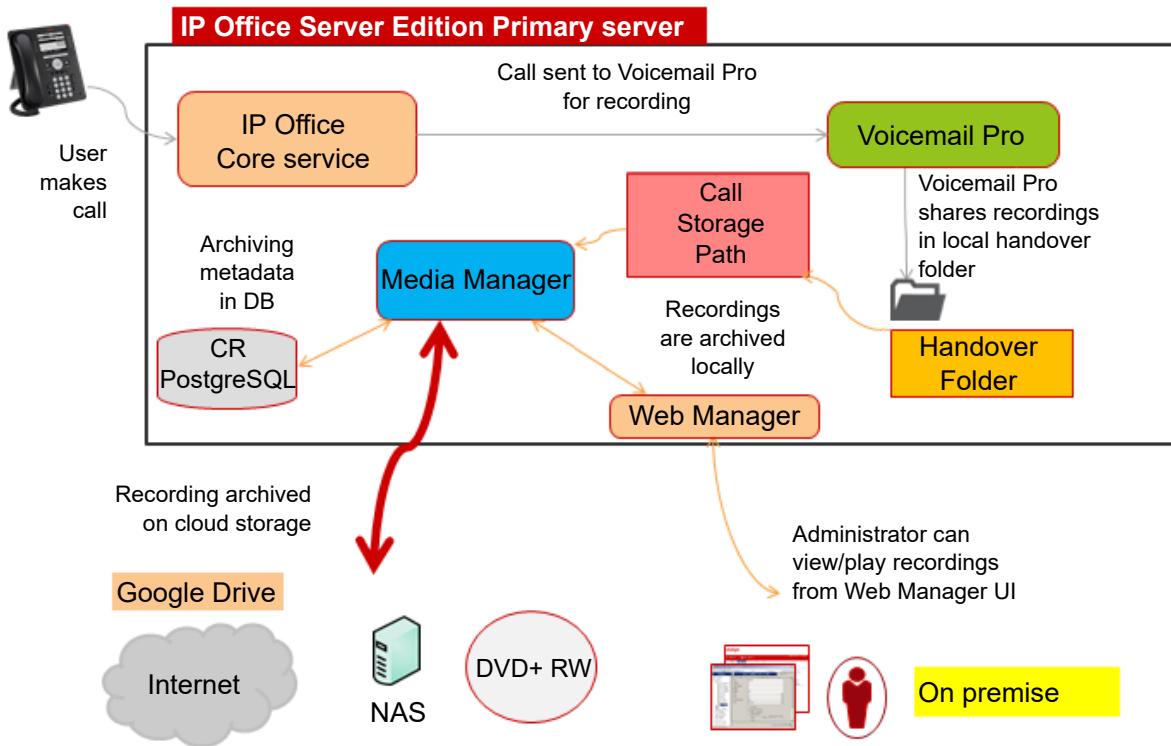
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- [Media Manager Architecture](#) on page 8
- [Media Manager Recording Capacity](#) on page 10
- [Resilience](#) on page 11
- [Administrator Access to Media Manager](#) on page 11
- [Backup and restore](#) on page 11
- [Encryption of recordings](#) on page 12
- [Using Cloud-Based Storage/Bring Your Own Storage](#) on page 12
- [Contact Recorder](#) on page 12

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## Media Manager Architecture

The diagram below shows of simplified summary of the architecture of Media Manager operation.



1. The IP Office system requests that Voicemail Pro records the call.
  - IP Office can automatically trigger recording for specific users, groups, incoming call routes, or account codes.
  - Voicemail Pro can trigger recording as part of a voicemail callflow.
  - Users can manually trigger recording.
  - The call recording configuration settings indicate the destination for recordings. That is either a voicemail mailbox or Media Manager (using the setting **Voice Recording Library**).
2. Voicemail Pro records the call. For recordings where the destination is set as **Voice Recording Library**, the recording is placed into a handover folder.
3. The Media Manager service constantly checks the handover folder:
  - Whenever a new recording is available, Media Manager moves the recording to its call storage folder. That can be a local hard drive or a folder in cloud-based storage.
  - Media Manager adds details of the call to the Media Manager database.
4. System administrators can access recordings using Web Manager. They can configure user access to recordings using the IP Office user portal application.
5. If Media Manager has been configured with an external connector, it copies new recordings to the external location.

## Related links

[IP Office Media Manager](#) on page 8

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# Media Manager Recording Capacity

Media Manager requires an additional drive which it uses as the location of its primary call storage folder. Media Manager uses this location to store recordings after transferring them from the temporary storage folder used by Voicemail Pro.

**! Important:**

- Avaya does not support Media Manager using the same drive that is hosting the Voicemail Pro service. Doing so will cause space conflicts with other IP Office applications and risks losing recordings during other IP Office maintenance activities.

You must either:

- Add an additional drive to the server hosting the Voicemail Pro service. Avaya recommends you add a pair of drives configured for RAID.
- Configure a cloud-based service as the primary call storage. Media Manager supports the following:
  - Google Bucket
  - Azure Blob
  - Amazon S3 Bucket

In operation, you can optimize the use of the primary call storage by having Media Manager also copy recordings to separate archive storage, which can be a DVD, NAS or cloud-based storage. After a time, the primary call storage will contain just the newest recordings whilst the archive contains old recordings.

## Estimating the storage capacity required

The required capacity for the storage you use for Media Manager depends on factors that will vary between different customers. You need to estimate the typical number and length of calls recordings that the customer's business will generate.

You also need to include how long the customer wants to retain recordings, and how the customer wants to use recordings in the primary call storage and those in a separate archive (if installed).

For both types of storage, you can use the following figures:

- Media Manager recordings require 60KB a minute for non-authenticated files, 120KB a minute for authenticated files.
- For the primary call storage, the minimum size Avaya support is 30GB. However, Avaya recommends 300GB or larger.

## Related links

[IP Office Media Manager](#) on page 8

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## Resilience

If the Server Edition Primary is unavailable, Media Manager is also unavailable. However, if you have configured Voicemail Pro resilience, the secondary server continues to record calls but cannot transfer them to the primary server.

Access to recordings resumes when the primary server comes back into service. After that, the two servers use SFTP to transfer call recordings made during resilience from the secondary server to the primary server.

For more information, see the [Administering IP Office Voicemail Pro](#) and [IP Office Resilience Overview](#) manuals.

### Related links

[IP Office Media Manager](#) on page 8

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## Administrator Access to Media Manager

By default, the IP Office administrator can access the Media Manager settings and recordings using the IP Office Web Manager. They can also configure additional administrators for access. They can also configure individual extension users for access to recordings through User Portal.

For more information, see [Managing access](#) on page 56.

### Related links

[IP Office Media Manager](#) on page 8

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## Backup and restore

The IP Office web management menus include functions to backup and restore settings, refer to the [Deploying IP Office Server Edition](#). For Media Manager, the backup options include:

|                                    | Description   |
|------------------------------------|---|
| <b>Media Manager Configuration</b> | The IP Office backup and restore processes can include the configuration settings of Media Manager application. |
| <b>Call Recordings Database</b>    | The IP Office backup and restore processes can include the Media Manager call details database                  |
| <b>Call Recordings</b>             | The IP Office backup and restore processes do not include the call recordings.                                  |

### Related links

[IP Office Media Manager](#) on page 8

## Encryption of recordings

For IP Office R11.1 and higher, Media Manager encrypts all recordings stored in its primary call storage folder.

- You can only play encrypted recordings through IP Office interfaces such as IP Office Web Manager or the User Portal.
- Media Manager decrypts recordings when downloaded using the IP Office interfaces. Recordings download using any other method, such as SSH access, remain encrypted.

For external archive connectors, you can select whether encryption is used.

- If encryption is enabled on a connector, it cannot be switched off.
- If encryption is not enabled on a connector, you must ensure that access to recording in the remote archive complies with local data protection and privacy requirements.

### Related links

[IP Office Media Manager](#) on page 8

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## Using Cloud-Based Storage/Bring Your Own Storage

For the local Media Manager service, you can use cloud-based storage if required. You can use this for the Media Manager service's primary call storage folder and/or for archive storage.

Media Manager supports the following types of cloud-based storage:

- Google Bucket
- Azure Blob
- Amazon S3 Bucket

To retain the recordings in primary storage indefinitely, you can set **Days to Retain Calls** to zero.

Files that are archived are copied from those in the primary storage. For playback, Media Manager uses the original recording in the primary storage unless it has been deleted in which cases it uses the archive copy.

### Related links

[IP Office Media Manager](#) on page 8

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## Contact Recorder

Contact Recorder is a previous IP Office application for archiving call recording.

To be able to search and replay existing call recordings through the Media Manager, the customer must migrate the Contact Recorder call recording database to Media Manager. The existing recordings do not need to be moved. See [Migrating Contact Recorder](#) on page 75.

**Related links**

[IP Office Media Manager](#) on page 8

# Chapter 2: Media Manager Setup

Media Manager uses the same hard drive as the IP Office service for its call recording database. However, for the actual call recordings, separate storage is required. That can be either:

- An additional hard disk (or pair of drives for RAID). Storage on the same disk used by Voicemail Pro and other IP Office applications is not supported. This documentation cannot cover the installation of the addition drive. Refer to the documentation for the specific server platform.
- An external cloud-based file store (Google bucket, Amazon S3 or Azure Blob).

## Related links

- [Licensing](#) on page 14  
[Verifying Media Manager license on Web Manager](#) on page 15  
[Verifying licenses on Voicemail Pro](#) on page 15  
[Activating an additional hard disk](#) on page 16  
[Preparing cloud-based file storage](#) on page 17  
[Starting the Media Manager service](#) on page 17  
[Configuring Media Manager](#) on page 18  
[Configuring the IP500 V2 System Address](#) on page 18

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## Licensing

Non-subscription IP Office systems require the following licenses:

- Standalone IP500 V2 system requires a Media Manager subscription.
- IP Office Server Edition, the primary server requires a Media Manager subscription.
- IP Office Select using dual-active voicemail servers, both the primary and secondary servers need a Media Manager license.

On systems that use PLDS licensing, Media Manager requires a VMPro Media Manager license to operate. Upgraded systems with an existing Voice Recordings Administrator license (used for Contact Recorder) can continue to use that license.

- **Trial Period:** On systems without a license, Media Manager operates for a 90-day trial period. This period starts when you start the Media Manager service in the system. After the trial period ends, IP Office Media Manager stops further recordings but keeps the recordings made during the trial period. You can add a license any time during the trial period or after its expiry.

## Applying licenses

For information about applying licenses, see the Applying licenses topic in [Administering Avaya IP Office™ Platform with Manager](#) or [Administering Avaya IP Office™ Platform with Web Manager](#).

### Related links

[Media Manager Setup](#) on page 14

# Verifying Media Manager license on Web Manager

### About this task

For systems using PLDS licensing, you can check the presence of the appropriate license in the IP Office system configuration.

### Procedure

1. Log on to the Web Manager interface.
2. Click **System Settings > Licenses**.
3. Verify that the VMPro Media Manager exists.
  - If your system is using WebLM licensing and the system does not display the license on the License screen, you can reserve a Media Manager license. To reserve a license, select the Remote server tab, set Media Manager to 1, and click **Update**.

### Related links

[Media Manager Setup](#) on page 14

# Verifying licenses on Voicemail Pro

### About this task

You can check the presence of the Media Manager license or subscription using the Voicemail Pro client. This validates that the voicemail service will place recordings in the correct location for collection by Media Manager when required.

### Procedure

1. Log on to the Web Manager interface.
2. Click **Applications > Voicemail Pro (Call Flow Management)**.
3. On the Voicemail Pro client, click **Help > About**.
4. Verify that the VRL (Media Manager) license is listed.

### Related links

[Media Manager Setup](#) on page 14

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# Activating an additional hard disk

## About this task

If using a local hard disk as the primary call storage for call recordings, you must use a separate hard disk. Storage of call recordings on the same disk used by Voicemail Pro and other IP Office services is not supported.

- For a new server with an addition hard disk already installed, configuration and formatting of the addition drive is part of the new server ignition process.
- For an existing server to which you want to add an additional disk post-ignition, follow the server platform instructions for adding a new drive. Then follow the procedure below to activate the additional hard disk in IP Office.
  - Avaya recommend that where possible, you add two additional drives configured as a RAID pair.

## Procedure

1. On a client computer, browse to `https://<IP address of the server>:7071` in the browser.
2. Enter the **User Name** and **Password** for the administrator account and click **Login**.
3. Select **Settings > System**.
4. Scroll down to the **Additional Hard Drive Information** settings.
5. Select the **Activate** check box.
6. In the **Mount Point Path** enter a mount path for the additional drive.
  - The default recommended value is `/additional-hdd#1`. When you add a hard drive using that path, a partition with the path `/additional-hdd#1/partition1` is automatically created for Media Manager.
  - The path is used by setting it as the Media Manager application's **Call Storage Path** (**Applications > Media Manager > Configuration**).
7. If the disk is new and does not contain any existing call recordings, then under **Format Hard Drive** select **Enable**.

 **Warning:**

- Do not format an existing drive that contains call recordings. Doing so will erase all existing call recordings without any option to recover those recordings.

8. Click **Save**.

## Next steps

- Check that the Media Manager service is running. See [Starting the Media Manager service](#) on page 17.

## Related links

[Media Manager Setup](#) on page 14

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## Preparing cloud-based file storage

As an alternative to using an additional local hard drive, external cloud-based storage can be used as the primary storage for Media Manager. If so, ensure you have configured your external cloud storage and it is ready to access:

- [Creating a Google Bucket for Media Manager](#) on page 42
- [Creating an Azure Blob for Media Manager](#) on page 46
- [Creating an Amazon S3 bucket for Media Manager](#) on page 50

### Related links

[Media Manager Setup](#) on page 14

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## Starting the Media Manager service

### About this task

Use this procedure to check that the Media Manager service has been started.

### Procedure

1. On a client computer, browse to `https://<IP address of the server>:7071` in the browser.
2. Enter the **User Name** and **Password** for the administrator account and click **Login**.
3. Click **Show Optional Services**.
4. Check that the check box next to **Media Manager** is selected. This instructs the service to restart the service each time it is restarted.
5. Click the **Start** button next to **Media Manager**.
6. Wait until the button shows **Stop**, indicating that the Media Manager service has started.

### Next steps

- Having started the service, it can now be configured to collect and store recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Media Manager Setup](#) on page 14

# Configuring Media Manager

## About this task

At minimum, Media Manager needs to be configured with the location from which it should collect call recordings made by the voicemail service and the location where it should then store those recordings. This is done through the web manager menus of the server hosting Media Manager.

## Before you begin

Ensure that the primary storage for recordings has been configured:

- If using a local hard drive, see [Activating an additional hard disk](#) on page 16.
- If using cloud base storage, see [Preparing cloud-based file storage](#) on page 17.

## Procedure

1. Login to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Configuration**.
3. In the **Handover Folder** field, check that the path is set to `/opt/vmpro/MM/VRL`. This is the path to which the voicemail service saves recordings it has been instructed to make available to Media Manager.
4. Set the **Call Storage Type** as required:
  - If set to **Local Hard Drive**, in the **Call Storage Path**, enter the path `/additional-hdd#1/partition1`. This should match the path and partition set for the additional hard drive where Media Manager should store call recordings.
  - If set to **Hosted Storage**, set the **Hosted Storage Type** and complete the required details for the cloud-based storage.
5. Edit any other Media Manager settings as required by the customer.
6. Click **Update**.

## Next steps

- Having configured the service, on systems where it is running on an IP Office Application Server supporting voice for an IP500 V2 system, the address of the IP500 V2 system needs to be added. See [Configuring the IP500 V2 System Address](#) on page 18.

## Related links

[Media Manager Setup](#) on page 14

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# Configuring the IP500 V2 System Address

## About this task

IP500 V2 systems support Media Manager by installing an IP Office Application Server to run both Voicemail Pro and Media Manager.

For user to access recordings through User Portal, the address of the IP500 V2 connected to the voicemail server needs to be entered into the application server's configuration using the process below.

## Procedure

1. Log on to the **Web Manager** interface of the Linux Application server.
2. Click **Preferences**.
3. In the **IP Office IP Address** field, type the IP address of the IP500 V2 server.
4. Click **Update**.

## Related links

[Media Manager Setup](#) on page 14

# Chapter 3: Media Manager Settings

All the Media Manager configuration settings are accessed through the **Applications > Media Manager** menu in IP Office Web Manager.

Using the IP Office security settings, you can configure which IP Office Web Manager service users have access to the Media Manager menus.

## Related links

[Media Manager Configuration Settings](#) on page 20

[Hosted Storage Type Configuration settings](#) on page 22

---

## Media Manager Configuration Settings

### Applications > Media Manager > Configuration

| Name                              | Description   |
|-----------------------------------|---|
| <b>Profile</b>                    | Default = Blank<br>The unique name that identifies the configuration profile.   |
| <b>Log Level</b>                  | Default = INFO<br>The selected log level for the Media Manager service. The options are <b>INFO</b> , <b>DEBUG</b> and <b>ERROR</b> .   |
| <b>Handover Folder</b>            | Default = /opt/vmpro/MM/VRL<br>The Voicemail Pro path from where Media Manager picks up the recordings. Voicemail Pro writes call recording files to this folder.   |
| <b>Days to Retain Calls</b>       | Default = 180 days. Range = 0 to 180 days.<br>The number of days for which the database retains the call details. After this, Media Manager deletes the call recordings. <ul style="list-style-type: none"><li>• To disable the deletion, enter 0.</li><li>• Note: Media Manager also starts deleting call recordings as soon as the allocated storage is full.</li></ul> |
| <b>Audit Retain Period (Days)</b> | Default = 180 days<br>The number of days for which the Audit Trail or recordings are retained in IP Office Media Manager. The minimum value for this field is 1 day and the maximum 365 days.   |

*Table continues...*

| Name                       | Description   |
|----------------------------|---|
| <b>Active Connector</b>    | <p>Default = Blank</p> <p>The connector being used for remote archiving copies of recordings. The drop-down menu lists all the available connectors that have been configured. Changing the connector results in a change in the archive destination. However, the recordings from the previous archives are still available.</p>   |
| <b>Call Storage Type</b>   | <p>Default = Local Hard Drive</p> <p>Sets the destination that Media Manager use as its primary storage for recordings collected from the <b>Handover Folder</b>.</p> <ul style="list-style-type: none"> <li>• <b>Local Hard Drive</b> - Use the local hard drive partition specified by the <b>Call Storage Path</b> setting.</li> <li>• <b>Hosted Storage</b> - Use the cloud-based storage specified by the <b>Hosted Storage Type</b> settings.</li> </ul>  |
| <b>Call Storage Path</b>   | <p>Default = Blank.</p> <p>This field is available when the <b>Call Storage Type</b> is set to <b>Local Hard Drive</b>.</p> <ul style="list-style-type: none"> <li>• If the additional drive was added using the path /additional-hdd#1, enter / additional-hdd#1/partition1. The additional drive path used can be seen in the server's <b>Platform View</b> menus.</li> <li>• If you must change the value after you have already started recording, copy all the sub-directories and files from the old directory to the new directory before you resume recording.</li> </ul> |
| <b>Hosted Storage Type</b> | <p>This field is available when the <b>Call Storage Type</b> is set to <b>Hosted Storage</b>. The supported options are <b>Amazon S3 Bucket</b>, <b>Google Cloud Storage Bucket</b>, and <b>Microsoft Azure Blob Storage</b></p> <p>Additional fields are shown depending on the selected <b>Call Storage Type</b>. For details, see the <a href="#">Administering Avaya IP Office™ Platform Media Manager</a> manual.</p>  |
| <b>Send Email</b>          | <p>Default = No</p> <p>The option to select whether the system must send emails for alarms and events.</p>  |
| <b>SMTP Mail Server</b>    | <p>Default = Blank</p> <p>The SMTP mail server that IP Office Media Manager uses to send email messages about alarms and events. If you leave this field blank, system cannot send email messages for alarms and events.</p>  |
| <b>SMTP Port</b>           | <p>Default = Blank</p> <p>The SMTP port to which the service sends email messages.</p>  |
| <b>Secured Connection</b>  | <p>Default = No</p> <p>The option to indicate whether the connection is secured. A secured connection uses Transport Layer Security (TLS) protocol to communicate.</p>  |

*Table continues...*

| Name                              | Description  |
|-----------------------------------|--|
| <b>SMTP User Name</b>             | Default = Blank<br>The user's name for the SMTP server. You can leave this field blank if SMTP server does not require sender authentication. If required, set the user's name here. |
| <b>SMTP Password</b>              | Default = Blank<br>The password for the SMTP server. You can leave this field blank if SMTP server does not require sender authentication. If required, set the password here.       |
| <b>SMTP Mail "From" Address</b>   | The address from which the SMTP emails containing the alarms and events originate.   |
| <b>Send Alarm/Event Emails To</b> | The email addresses to which alarms and events must be sent. You can add more than one email address by adding a semi-colon (;) between two email addresses.                         |

**Related links**

[Media Manager Settings](#) on page 20

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## Hosted Storage Type Configuration settings

The following additional settings are shown and need to be configured when a **Call Storage Type** is set to **Hosted Storage**.

### Google Cloud Storage Bucket

The following options are shown when the **Hosted Storage Type** is set to **Google Cloud Storage Bucket** as primary storage. For details of setting up a Google cloud storage bucket, see [Creating a Google Bucket for Media Manager](#) on page 42.

| Name                              | Description   |
|-----------------------------------|---|
| <b>Bucket Name</b>                | Enter a unique bucket name that meets the bucket name requirements. See <a href="#">Bucket naming guidelines</a> .                                  |
| <b>Parent Folder</b>              | Enter a unique parent folder name.  |
| <b>Import Service Account Key</b> | Browse and select the and select the .JSON file that you downloaded after creating your Google Cloud Bucket. See <a href="#">Service Accounts</a> . |

### Microsoft Azure Blob Storage

The following options are shown when the **Hosted Storage Type** is set to **Microsoft Azure Blob Storage** as primary storage. For details of setting up Microsoft Azure Blob storage, see [Creating an Azure Blob for Media Manager](#) on page 46.

| Name                        | Description   |
|-----------------------------|---|
| <b>Storage Account Name</b> | A storage account provides allows to specify a unique name. Every media recordings that you store in the external storage has an address that includes the unique storage account name. |
| <b>Azure Container Name</b> | Enter a container name. See <a href="#">Naming and referencing containers, blobs, and metadata</a> .  |
| <b>Parent Folder</b>        | Enter a unique parent folder name.  |
| <b>SAS Token</b>            | Enter the generated SAS token. See <a href="#">Authorize access to data in Azure Storage</a> .  |

### Amazon S3 Bucket

The following options are shown when the **Hosted Storage Type** is set to **Amazon S3 Bucket** as primary storage. For details of setting up an Amazon S3 storage bucket, see [Creating an Amazon S3 bucket for Media Manager](#) on page 50.

| Name                          | Description  |
|-------------------------------|--|
| <b>Bucket Name</b>            | Enter a unique bucket name that meets the bucket name requirements. See <a href="#">Naming rules</a> . |
| <b>Parent Folder</b>          | Enter a unique parent folder name.   |
| <b>User Access key ID</b>     | Enter the created access key ID. See <a href="#">Access keys</a> .                                     |
| <b>User Secret access Key</b> | Enter the created secret access key. See <a href="#">Access keys</a> .                                 |

### Related links

[Media Manager Settings](#) on page 20

# Part 2: Recording Calls

# Chapter 4: Managing Call Recording

Whilst Media Manager stores call recordings and manages their searching and playback, the actual recording of calls is performed by the Voicemail Pro service. Configuration of call recording is done through the Voicemail Pro client and the IP Office system configuration settings.

## Related links

- [Switching the call recording warning on/off](#) on page 25
- [Setting the maximum call recording length](#) on page 26
- [Configuring the recording display](#) on page 26
- [Configuring a user's manual call recording destination](#) on page 27
- [Configuring automatic call recording for a user](#) on page 27
- [Configuring auto recording for a hunt group](#) on page 28
- [Configuring automatic call recording for an incoming call route](#) on page 29
- [Configuring auto recording for account code](#) on page 30

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## Switching the call recording warning on/off

In many countries, it is requirement to warn those involved in a call that they are being recorded. One method for doing this is to enable the Advice of Call Recording (AOCR) message provided by the Voicemail Pro server.

- The **Play Advice on Call Recording** option is enabled by default.
- When the call is using analogue trunks, on outgoing calls it can not be guaranteed that a caller hears an 'advice of recording' announcement. Analogue trunks do not support call status signalling, so the announcement is played as soon as the trunk is seized even if the call is ringing and has not been answered.

### About this task

Use this procedure to enable advice of call recording.

### Procedure

1. From the Voicemail Pro client, select **Administration > Preferences > General**.
2. Click **Play Advice on Call Recording** check box.
3. Click **OK**.

4. Click **Save & Make Live**.

#### Related links

[Managing Call Recording](#) on page 25

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## Setting the maximum call recording length

#### About this task

You can specify the maximum length of call recordings made by Voicemail Pro. The maximum limit is 5 hours.

#### Procedure

1. In the Voicemail Pro client, click **Administration > Preferences > General**.
2. In **Max. VRL Record Length (secs)**, type the time in seconds. The maximum value is 18000 seconds.
3. Click **OK**.
4. Click **Save & Make Live**.

#### Related links

[Managing Call Recording](#) on page 25

---

## Configuring the recording display

#### About this task

Some Avaya terminals display **REC** when a call is being recorded. Use this procedure to hide this indication on supported phones.

#### Procedure

1. Start IP Office Manager and load the configuration from the primary server.
2. In the navigation pane, click **System**.
3. Click the **Voicemail** tab.
4. Select the **Hide auto recording** check box.
5. Save the configuration.

#### Related links

[Managing Call Recording](#) on page 25

# Configuring a user's manual call recording destination

## About this task

Users can manually trigger the recording of call using a variety of methods. Through the system configuration you can configure for each user, where manually recorded calls should be stored. The default otherwise is to place the recordings in the users own voicemail mailbox.

## Procedure

1. Start IP Office Manager and load the system configuration.
2. On the navigation pane, click a **User**.
3. Click the **Voice Recording** tab.
4. Configure the recording settings as required:

| Name               | Description   |
|--------------------|---|
| <b>Destination</b> | <p>Set the destination of the call recordings. The options are:</p> <ul style="list-style-type: none"> <li>• <b>Mailbox</b><br/>Store the recordings in the voicemail mailbox selected. Users can access and manage these recordings using the voicemail mailbox controls.</li> <li>• <b>Voice Recording Library</b><br/>Transfer the recordings to Media Manager.</li> <li>• <b>Voice Recording Library Authenticated</b><br/>This is a legacy setting. It operates the same as <b>Voice Recording Library</b>.</li> </ul> |

5. Click **OK**.
6. Save the configuration.

## Related links

[Managing Call Recording](#) on page 25

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# Configuring automatic call recording for a user

## About this task

For each user, you can configure automatic recording of their calls and the destination for those automatic recordings.

## Procedure

1. Start IP Office Manager and load the system configuration.
2. On the navigation pane, click a **User**.
3. Click the **Voice Recording** tab.

4. Configure the recording settings as required:

| Name                     | Description   |
|--------------------------|---|
| <b>Inbound</b>           | Sets the frequency of call recording:   |
| <b>Outbound</b>          | <ul style="list-style-type: none"> <li>• <b>None</b>: Do not record calls.</li> <li>• <b>On</b>: Record calls if a recording channel is available.</li> <li>• <b>Mandatory</b>: Record calls if a recording channel is available. If no recording channel is available, return busy tone to the caller.</li> <li>• <b>xx%</b>: Record calls at the set percentage. For example, setting 25% records 1 call in every 4 on average.</li> </ul>  |
| <b>Auto Record Calls</b> | Set the type of calls recorded. The options are <b>Internal</b> , <b>External</b> or <b>External &amp; Internal</b> .   |
| <b>Destination</b>       | <p>Set the destination of the call recordings. The options are:</p> <ul style="list-style-type: none"> <li>• <b>Mailbox</b><br/>Store the recordings in the voicemail mailbox selected. Users can access and manage these recordings using the voicemail mailbox controls.</li> <li>• <b>Voice Recording Library</b><br/>Transfer the recordings to Media Manager.</li> <li>• <b>Voice Recording Library Authenticated</b><br/>This is a legacy setting. It operates the same as <b>Voice Recording Library</b>.</li> </ul> |
| <b>Time Profile</b>      | Optional. Select an existing IP Office time profile to specify when the IP Office uses the automatic call recording settings. If no time profile is selected, the IP Office uses automatic call recording all the time.   |

5. Click **OK**.

6. Save the configuration.

## Related links

[Managing Call Recording](#) on page 25

## Configuring auto recording for a hunt group

### About this task

You can configure automatic call recording for calls to a hunt group.

### Procedure

1. Start IP Office Manager and load the system configuration.
2. On the navigation pane, select the hunt group.
3. Click the **Voice Recording** tab.

4. Configure the settings as required:

| Name                       | Description  |
|----------------------------|--|
| <b>Record Inbound</b>      | Sets the frequency of call recording: <ul style="list-style-type: none"> <li>• <b>None</b>: Do not record calls.</li> <li>• <b>On</b>: Record calls if a recording channel is available.</li> <li>• <b>Mandatory</b>: Record calls if a recording channel is available. If no recording channel is available, return busy tone to the caller.</li> <li>• <b>xx%</b>: Record calls at the set percentage. For example, setting 25% records 1 call in every 4 on average.</li> </ul>                                   |
| <b>Record Time Profile</b> | Optional. Select an existing IP Office time profile to specify when the IP Office uses the automatic call recording settings. If no time profile is selected, the IP Office uses automatic call recording all the time.  |
| <b>Recording (Auto)</b>    | Set the destination of the call recordings. The options are: <ul style="list-style-type: none"> <li>• <b>Mailbox</b><br/>Store the recordings in the voicemail mailbox selected. Users can access and manage these recordings using the voicemail mailbox controls.</li> <li>• <b>Voice Recording Library</b><br/>Transfer the recordings to Media Manager.</li> <li>• <b>Voice Recording Library Authenticated</b><br/>This is a legacy setting. It operates the same as <b>Voice Recording Library</b>.</li> </ul> |
| <b>Auto Record Calls</b>   | Set the type of calls recorded. The options are <b>Internal</b> , <b>External</b> or <b>External &amp; Internal</b> .  |

5. Click **OK**.

6. Save the configuration.

## Related links

[Managing Call Recording](#) on page 25

# Configuring automatic call recording for an incoming call route

## About this task

You can automatically record incoming external calls routed by a particular incoming call route.

## Procedure

1. Start IP Office Manager and load the system configuration.
2. On the navigation pane, click **Incoming Call Route**.

3. Click the **Voice Recording** tab.
4. Configure the settings as required:

| Name                       | Description  |
|----------------------------|--|
| <b>Record Inbound</b>      | Sets the frequency of call recording: <ul style="list-style-type: none"> <li>• <b>None</b>: Do not record calls.</li> <li>• <b>On</b>: Record calls if a recording channel is available.</li> <li>• <b>Mandatory</b>: Record calls if a recording channel is available. If no recording channel is available, return busy tone to the caller.</li> <li>• <b>xx%</b>: Record calls at the set percentage. For example, setting 25% records 1 call in every 4 on average.</li> </ul>                                   |
| <b>Record Time Profile</b> | Optional. Select an existing IP Office time profile to specify when the IP Office uses the automatic call recording settings. If no time profile is selected, the IP Office uses automatic call recording all the time.  |
| <b>Recording Auto</b>      | Set the destination of the call recordings. The options are: <ul style="list-style-type: none"> <li>• <b>Mailbox</b><br/>Store the recordings in the voicemail mailbox selected. Users can access and manage these recordings using the voicemail mailbox controls.</li> <li>• <b>Voice Recording Library</b><br/>Transfer the recordings to Media Manager.</li> <li>• <b>Voice Recording Library Authenticated</b><br/>This is a legacy setting. It operates the same as <b>Voice Recording Library</b>.</li> </ul> |

5. Click **OK**.
6. Save the configuration.

#### Related links

[Managing Call Recording](#) on page 25

## Configuring auto recording for account code

### About this task

You can automatically record outgoing external calls that use a particular account code.

### Procedure

1. Start IP Office Manager and load the system configuration.
2. On the navigation pane, click **Account Code**.
3. Click the **Voice Recording** tab.
4. Configure the settings as required:

| Name                       | Description  |
|----------------------------|--|
| <b>Record Outbound</b>     | Sets the frequency of call recording: <ul style="list-style-type: none"> <li>• <b>None:</b> Do not record calls.</li> <li>• <b>On:</b> Record calls if a recording channel is available.</li> <li>• <b>Mandatory:</b> Record calls if a recording channel is available. If no recording channel is available, return busy tone to the caller.</li> <li>• <b>xx%:</b> Record calls at the set percentage. For example, setting 25% records 1 call in every 4 on average.</li> </ul>                                   |
| <b>Record Time Profile</b> | Optional. Select an existing IP Office time profile to specify when the IP Office uses the automatic call recording settings. If no time profile is selected, the IP Office uses automatic call recording all the time.  |
| <b>Recording (Auto)</b>    | Set the destination of the call recordings. The options are: <ul style="list-style-type: none"> <li>• <b>Mailbox</b><br/>Store the recordings in the voicemail mailbox selected. Users can access and manage these recordings using the voicemail mailbox controls.</li> <li>• <b>Voice Recording Library</b><br/>Transfer the recordings to Media Manager.</li> <li>• <b>Voice Recording Library Authenticated</b><br/>This is a legacy setting. It operates the same as <b>Voice Recording Library</b>.</li> </ul> |

5. Click **OK**.
6. Save the configuration.

#### Related links

[Managing Call Recording](#) on page 25

# Part 3: Connectors and Archiving

# Chapter 5: Managing Connectors for Recording Archiving

In addition to storing call recordings on an additional hard disk, Media Manager can also archive the recordings to an external store. This is done using connectors.

## Related links

[Adding a Connector](#) on page 33

[Modifying the details of a Connector](#) on page 34

[Deleting an existing Connector](#) on page 35

---

## Adding a Connector

### About this task

IP Office Media Manager provides the option to remotely archive your call recordings.

 **Note:**

For configuring NAS archiving, SMB protocol version 2 and 3 is supported. SMB version 3 is more secured protocol and can be used for encryption.

### Before you begin

Ensure you have configuration access to Web Manager.

### Procedure

1. Log in to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Connectors**.
3. Click **Add** and select one of the options as required:
  - **DVD** See [Archiving to DVD](#) on page 36.
  - **Google** See [Archiving to Google Drive](#) on page 40.
  - **NAS** See [Archiving to an External NAS](#) on page 38.
  - **Google Bucket** See [Using Google Cloud bucket storage](#) on page 42.
  - **Azure Blob** See [Using Azure Blob storage](#) on page 46.

- **Amazon S3 Bucket** See [Using Amazon S3 storage on page 50](#).

## Related links

[Managing Connectors for Recording Archiving](#) on page 33  
[Connectors](#) on page 34

## Connectors

### Applications > Media Manager > Connectors

For details of adding and editing connectors, see the [Administering Avaya IP Office™ Platform Media Manager](#) manual.

| Name                                | Description  |
|-------------------------------------|--|
| <b>Add</b>                          | The drop-down menu to select a connector. The options are <b>DVD</b> , <b>NAS</b> , <b>Google drive</b> , <b>Amazon S3 Bucket</b> , <b>Google Cloud Storage Bucket</b> and <b>Microsoft Azure Blob Storage</b> . |
| <b>Name</b>                         | The name of the connector.   |
| <b>Type</b>                         | The type of connector selected.  |
| <b>Active</b>                       | The state of the connector.  |
| <b>Reachable</b>                    | The field that indicates whether the connector is reachable.   |
| <b>Pending Files #</b>              | The files that are yet to be archived.   |
| <b>Last Successful Archive Time</b> | The time the connector was last used successfully.   |

## Related links

[Adding a Connector](#) on page 33

## Modifying the details of a Connector

### Procedure

1. Login to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Configuration**.
3. Click the icon corresponding to the connector you want to modify.
4. Update the details of the connector as required.
5. (Optional) Click **Test Connection** to verify the connection with the updated details and credentials.
6. Click **Update**.

## Related links

[Managing Connectors for Recording Archiving](#) on page 33

---

# Deleting an existing Connector

## About this task

Use this procedure to delete an existing connector.



### Warning:

Once any recording has been archived through a connector, you cannot delete that connector.

## Procedure

1. Login to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Configuration**.
3. Click the  icon corresponding to the connector you want to delete.
4. Click **Yes** on the confirmation dialog box.

## Related links

[Managing Connectors for Recording Archiving](#) on page 33

# Chapter 6: Archiving to DVD

IP Office Media Manager provides the option to archive audio call recordings generated by Voicemail Pro on a DVD+RW drive.

You must monitor the storage capacity and keep a blank DVD+RW available. Insert the blank DVD+RW after a full DVD is ejected. New recordings during the change of DVD are archived after you insert a new DVD.

## Related links

[Configuring DVD archiving](#) on page 36

---

## Configuring DVD archiving

### Before you begin

Ensure you have the DVD name, path, and DVD label handy.

### Procedure

1. Login to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Configuration**.
3. Click **Add**.
4. Select **DVD**.
5. In the Add DVD Connector window:
  - In the **Name** field, type a name.
  - In the **Path** field, enter the file path for the DVD drives, for example, `/dev/sr0`.
  - In the **DVD Label** field, type the DVD label.
6. Use the **Encrypt Recording** setting to select whether recordings should be encrypted.  
Note, you cannot set **Encrypt Recording** back to **NO** after saving the connector.
  - If encrypted, recordings can only be replayed from IP Office menus. Recordings are unencrypted when downloading from an IP Office menu.
  - If unencrypted, you must ensure that access to recordings in the archive complies with local data protection and privacy requirements.

7. Click **Test Connection**. If connection is successful, click **Create**. Otherwise, check and adjust the settings as required.
8. To start using the connector for archiving, select the connector from the **Active Connector** field and click **Update**.

## Result

- Media Manager will regularly copy new recordings from the primary call storage folder to the archive storage.

## Related links

[Archiving to DVD](#) on page 36

# Chapter 7: Archiving to an External NAS

IP Office Media Manager can archive call recordings to a Network-Attached Storage (NAS). The archived recordings on NAS are then made available to the users through Media Manager and web admin interface.

- Media Manager support NAS archiving of recordings at the maximum recording call rate.
- Media Manager runs a scheduling task to archive any new recordings every 5 minutes.

Tested example scenarios include:

- 18000 recordings of 5MB each takes approximately 1 hour to archive to an external NAS drive.
- 3000 recordings of 15MB each takes approximately 8 minutes to archive to an external NAS drive.

 **Note:**

When you configure NAS or any connector for the archival process, and when the Media Manager file is processed from source to the destination, along with new recordings it also archives the old recording file into the configured NAS or connector driver.

If a recording file is deleted in the call storage path due to **Days to Retain Calls** or space limit, the media manager checks the recording file in the NAS or connector archival. If you cannot play the recording in NAS, then please contact your administrator.

## Related links

[Configuring NAS archiving](#) on page 38

---

## Configuring NAS archiving

 **Note:**

For configuring NAS archiving, SMB protocol version 2 and 3 is supported. SMB version 3 is more secured protocol and can be used for encryption.

### Before you begin

Ensure you have the path, and user credentials of the file share created on the NAS.

### Procedure

1. Login to **Web Manager** on the server hosting Media Manager.

2. Click **Applications > Media Manager > Configuration**.
3. Click **Add**.
4. Select **NAS**.
5. On the Add NAS Connector window:
  - a. Enter a **Name** for the NAS connector.
  - b. Enter the **Path** for the NAS connector. This is the path of the file share. The path must be in the format IP address/SharePath. For example: 148.147.54.1/Remote archive.
  - c. In the **User Name For Fileshare** field, enter the username to access file share.
  - d. In the **Password For Fileshare** field, enter the password for the username to access file share.
6. Use the **Encrypt Recording** setting to select whether recordings should be encrypted. Note, you cannot set **Encrypt Recording** back to **NO** after saving the connector.
  - If encrypted, recordings can only be replayed from IP Office menus. Recordings are unencrypted when downloading from an IP Office menu.
  - If unencrypted, you must ensure that access to recordings in the archive complies with local data protection and privacy requirements.
7. Click **Test Connection**. If connection is successful, click **Create**. Otherwise, check and adjust the settings as required.
8. To start using the connector for archiving, select the connector from the **Active Connector** field and click **Update**.

## Result

- Media Manager will regularly copy new recordings from the primary call storage folder to the archive storage.

## Related links

[Archiving to an External NAS](#) on page 38

# Chapter 8: Archiving to Google Drive

IP Office Media Manager can archive call recordings on a Google drive. The archived recordings on the Google drive are then made available to the users through Media Manager and Web Self-Admin interface. You must create a Google drive for Media Manager and configure the drive as a connector before you start archiving.

## Related links

[Creating a Google drive for Media Manager](#) on page 40

[Configuring Google drive archiving](#) on page 41

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## Creating a Google drive for Media Manager

### About this task

This section provides the high-level steps to create a Google drive for use by Media Manager.

### Procedure

1. Navigate to <https://console.developers.google.com/>.
2. Create a project.
3. Click **Drive API** to enable the API.
4. Click **Credentials > Create Credentials > OAuth Client ID**.
5. On the Configure Consent screen, type the **Product Name**.
6. In the **Select Application Type** field, select **Web Application**.
7. In the **Authorized Redirect URIs** field, enter `https://<FQDN>:49001/Callback`.  
You must provide the FQDN and not an IP address.
8. Click **Create**.
9. Download and save the JSON file.

### Next steps

Using the downloaded JSON file, create a connector to the Google drive. See [Configuring Google drive archiving](#) on page 41.

## Related links

[Archiving to Google Drive](#) on page 40

# Configuring Google drive archiving

## Before you begin

Create a Google project and download the JSON file. See [Creating a Google drive for Media Manager](#) on page 40.

## Procedure

1. Login to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Configuration**.
3. Click **Add**.
4. Select **Google**.
5. On the Add Google Connector window, in the **Name** field, type the name of the connector.
6. Use the **Encrypt Recording** setting to select whether recordings should be encrypted.  
Note, you cannot set **Encrypt Recording** back to **NO** after saving the connector.
  - If encrypted, recordings can only be replayed from IP Office menus. Recordings are unencrypted when downloading from an IP Office menu.
  - If unencrypted, you must ensure that access to recordings in the archive complies with local data protection and privacy requirements.
7. Click **Browse** and select the **JSON** file that you downloaded after creating your Google drive.
8. Click **Upload**.
9. Click **Test Connection**. If connection is successful, click **Create**. Otherwise, check and adjust the settings as required.
10. To start using the connector for archiving, select the connector from the **Active Connector** field and click **Update**.

## Result

- Media Manager will regularly copy new recordings from the primary call storage folder to the archive storage.

## Related links

[Archiving to Google Drive](#) on page 40

# Chapter 9: Using Google Cloud bucket storage

Media Manager can use a Google Cloud bucket as storage for recordings. It can use this as its primary storage and/or as archive connector storage.

## Related links

- [Creating a Google Bucket for Media Manager](#) on page 42
- [Configuring cloud-based storage as primary storage](#) on page 43
- [Configuring a Google Cloud bucket archiving connector](#) on page 44

---

## Creating a Google Bucket for Media Manager

### About this task

This section provides the high-level steps to create a Google Bucket for Media Manager use. It can use this as its primary storage and/or as archive connector storage.

### Before you begin

Ensure you have an account, created a project, and enabled it in the Google Cloud console.

### Procedure

1. In the Google Cloud Console, go to <https://console.cloud.google.com/storage/browser>.
2. Click **Create bucket** to open the bucket creation form.
3. Click **Create folder**.
4. Enter the folder name in the following format: parent-folder <name>.
5. In the Google Cloud Console, go to the Service Accounts page.
6. Click **Select** your project.
7. Click the email address of the service account to create a key.
8. Click the **Keys** tab.
9. Click **Add key** and select **Create new key**.
10. Select **JSON** as the **Key type** and click **Create**.

Clicking **Create** downloads a service account key file.

11. Go to the browser page and click the Bucket overflow menu.  
Select the bucket associated to which you want to grant a member a role
12. Choose **Edit bucket permissions**.
13. Click **+ Add members**.
14. In the **New members** field, enter service account mail id.
15. Select the following roles from the **Select a role** menu.
  - Storage Legacy Bucket Writer
  - Storage Legacy Object Read
16. Click **Save**.

## Next steps

The external storage can now be used for as either the primary call storage folder for Media Manager or as a connector for archiving recordings:

- [Configuring cloud-based storage as primary storage](#) on page 43
- [Configuring an Azure Blob Storage archiving connector](#) on page 48

## Related links

[Using Google Cloud bucket storage](#) on page 42

# Configuring cloud-based storage as primary storage

## About this task

Use this procedure to configure external cloud-based storage as the primary call storage folder for Media Manager.

## Before you begin

Ensure you have configured your external cloud storage and it is ready to access:

- [Creating a Google Bucket for Media Manager](#) on page 42
- [Creating an Azure Blob for Media Manager](#) on page 46
- [Creating an Amazon S3 bucket for Media Manager](#) on page 50

## Procedure

1. Go to the **Configuration** view.
2. In **Call Storage Type**, select **Hosted Storage Type**.
3. In **Hosted Storage Type**, select the required external storage.
4. Enter the configuration settings as per the selected type of external storage. See [Hosted Storage Type Configuration settings](#) on page 22.

5. Click **Test Connection**.

6. Click **Save**.

## Result

- All new recordings are stored in the configured external storage.

## Related links

[Using Google Cloud bucket storage](#) on page 42

[Using Azure Blob storage](#) on page 46

[Using Amazon S3 storage](#) on page 50

---

# Configuring a Google Cloud bucket archiving connector

## About this task

You can use the following process to use a Google Cloud bucket as a connector for archiving call recordings from the primary call storage folder.

## Before you begin

- Create a Google project and download the JSON file. See [Creating a Google Bucket for Media Manager](#) on page 42.

## Procedure

1. Log in to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Connectors**.
3. Click **Add**.
4. Select **Google Cloud Storage Bucket**.
5. On the Add Google Cloud Bucket Connector window, in the **Name** field, type the name of the connector.
6. Add the **Bucket Name**.
7. Enter the **Parent Folder** name.
8. In Service Accounts, browse and select the .JSON file downloaded after creating your Google Cloud bucket.
9. Click **Upload**.
10. Use the **Encrypt Recording** setting to select whether recordings should be encrypted. Note, you cannot set **Encrypt Recording** back to **NO** after saving the connector.
  - If encrypted, recordings can only be replayed from IP Office menus. Recordings are unencrypted when downloading from an IP Office menu.
  - If unencrypted, you must ensure that access to recordings in the archive complies with local data protection and privacy requirements.

11. Click **Test Connection**. If connection is successful, click **Create**. Otherwise, check and adjust the settings as required.
12. To start using the connector for archiving, select the connector from the **Active Connector** field and click **Update**.

## Result

- Media Manager will regularly copy new recordings from the primary call storage folder to the archive storage.

## Related links

[Using Google Cloud bucket storage on page 42](#)

# Chapter 10: Using Azure Blob storage

Media Manager can use an Azure Blob as storage for recordings. It can use this as its primary storage and/or as archive connector storage.

## Related links

- [Creating an Azure Blob for Media Manager](#) on page 46
- [Configuring cloud-based storage as primary storage](#) on page 43
- [Configuring an Azure Blob Storage archiving connector](#) on page 48

---

## Creating an Azure Blob for Media Manager

### About this task

This section provides the high-level steps to create Azure Blob storage for Media Manager use. It can use this as its primary storage and/or as archive connector storage.

### Before you begin

Ensure you have an active Azure subscription to access the Azure Blob storage account.

### Procedure

1. Go to Azure portal <https://portal.azure.com/#home>.
2. Select **Storage accounts** to display a list of your storage accounts.
3. On the **Create a storage account** page in fill in the required information.
4. Select **Review + create**. Azure runs validation on the storage account settings that you select.
  - If validation passes, you can proceed to create the storage account.
  - If validation fails, modify the settings indicated by the portal.
5. On the **Storage accounts** page, select **Create**.
6. Navigate to your new storage account in the Azure portal.
7. Go to **Data storage > Blob containers**.
8. Select the **+ Container** button. For more information about creating container, see [create containers](#).

9. Type a name for your new container.

Ensure the name of the new container follows the valid DNS name. See [Naming and referencing containers, blobs, and metadata](#) for more information.

10. Set the level of public access to the container.

11. Select **OK** to create the container.

12. Add a parent folder inside the container.

13. Go to your blob and select **Generate SAS**. See [Authorize access to data in Azure Storage](#).

14. Select **Signing method > Account key**.

15. To define **Permissions**, select the following permissions:

- Blob Read
- Blob Write
- Blob List
- Blob Update
- Blob Delete

16. Review and select **Generate SAS token and URL**.

The **Blob SAS token** query string and **Blob SAS URL** are displayed in the lower area of the window.

17. Copy and paste the **Blob SAS token** and URL values in a secure location.

 **Note:**

The **Blob SAS token** is displayed once and cannot be retrieved after the window is closed.

## Next steps

The external storage can now be used for as either the primary call storage folder for Media Manager or as a connector for archiving recordings:

- [Configuring cloud-based storage as primary storage](#) on page 43
- [Configuring an Azure Blob Storage archiving connector](#) on page 48

## Related links

[Using Azure Blob storage](#) on page 46

# Configuring cloud-based storage as primary storage

## About this task

Use this procedure to configure external cloud-based storage as the primary call storage folder for Media Manager.

## Before you begin

Ensure you have configured your external cloud storage and it is ready to access:

- [Creating a Google Bucket for Media Manager](#) on page 42
- [Creating an Azure Blob for Media Manager](#) on page 46
- [Creating an Amazon S3 bucket for Media Manager](#) on page 50

## Procedure

1. Go to the **Configuration** view.
2. In **Call Storage Type**, select **Hosted Storage Type**.
3. In **Hosted Storage Type**, select the required external storage.
4. Enter the configuration settings as per the selected type of external storage. See [Hosted Storage Type Configuration settings](#) on page 22.
5. Click **Test Connection**.
6. Click **Save**.

## Result

- All new recordings are stored in the configured external storage.

## Related links

- [Using Google Cloud bucket storage](#) on page 42
- [Using Azure Blob storage](#) on page 46
- [Using Amazon S3 storage](#) on page 50

---

# Configuring an Azure Blob Storage archiving connector

## About this task

After configuring an Azure Blob, you can use the following process to use it as a connector for archiving call recordings from the primary call storage folder.

## Before you begin

Ensure you have a Blob container details and SAS token. See [Creating an Azure Blob for Media Manager](#) on page 46.

## Procedure

1. Log in to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Connectors**.
3. Click **Add**.
4. Select **Microsoft Azure Blob Storage**.

5. On the Add Azure Blob Storage Connector window, in the **Name** field, type the name of the connector.
6. Add the **Name**.
7. Enter **Storage Account Name**.
8. Enter **Container Name**.
9. Enter the **Parent Folder** name.
10. Enter **SAS Token**.
11. Use the **Encrypt Recording** setting to select whether recordings should be encrypted.  
Note, you cannot set **Encrypt Recording** back to **NO** after saving the connector.
  - If encrypted, recordings can only be replayed from IP Office menus. Recordings are unencrypted when downloading from an IP Office menu.
  - If unencrypted, you must ensure that access to recordings in the archive complies with local data protection and privacy requirements.
12. Click **Test Connection**. If connection is successful, click **Create**. Otherwise, check and adjust the settings as required.
13. To start using the connector for archiving, select the connector from the **Active Connector** field and click **Update**.

## Result

- Media Manager will regularly copy new recordings from the primary call storage folder to the archive storage.

## Related links

[Using Azure Blob storage](#) on page 46

# Chapter 11: Using Amazon S3 storage

Media Manager can use Amazon Simple Storage Service (Amazon S3) as storage for recordings. It can use this as its primary storage and/or as archive connector storage.

## Related links

- [Creating an Amazon S3 bucket for Media Manager](#) on page 50
- [Configuring cloud-based storage as primary storage](#) on page 43
- [Configuring an Amazon S3 archiving connector](#) on page 52

---

## Creating an Amazon S3 bucket for Media Manager

### About this task

This section provides the high-level steps to create an Amazon S3 bucket storage for Media Manager use. It can use this as its primary storage and/or as archive connector storage.

### Procedure

1. Sign in to the AWS Management Console and open the Amazon S3 console at <https://console.aws.amazon.com/s3/>.
2. Select **Create bucket**.
3. In **Bucket Name**, enter a DNS compliant name for your bucket.

 **Note:**

After you create the bucket, you cannot change its name. For information about naming buckets, see [Bucket naming rules](#).

4. In **Region**, choose the AWS Region where you want the bucket to reside.
5. In **Bucket settings for Block Public Access**, select **Block Public Access** to apply to the bucket.
6. Select **Create bucket** see [Creating a bucket](#).
7. Add resource bucket **Name** and set **Object** to **Any**.
8. Navigate to your new Amazon S3 bucket.
9. Add a parent folder in the container.

10. Create and configure IAM user policies for controlling user access to the Amazon S3 bucket. For more information, see [Creating an IAM User in Your AWS account](#).
11. Grant group-level permissions for the Amazon S3 bucket.

Provide access to the following bucket operations for accessing the bucket:

- GetObject
- PutObject
- DeleteObject
- GetBucketLocation

12. Use your AWS account ID or account alias, IAM username, and password to sign in to the [IAM console](#).
13. In the navigation bar on the upper right, choose your username, and select **My Security Credentials**.
14. Expand the **Access keys (access key ID and secret access key)** section. See [Managing access keys \(console\)](#).
15. Click **Create New Access Key**.

The access key includes access key IDs and secret access keys. Save the keys for configuring the Amazon S3 bucket in Media Manager.

## Next steps

The external storage can now be used for as either the primary call storage folder for Media Manager or as a connector for archiving recordings:

- [Configuring cloud-based storage as primary storage](#) on page 43
- [Configuring an Amazon S3 archiving connector](#) on page 52

## Related links

[Using Amazon S3 storage](#) on page 50

# Configuring cloud-based storage as primary storage

## About this task

Use this procedure to configure external cloud-based storage as the primary call storage folder for Media Manager.

## Before you begin

Ensure you have configured your external cloud storage and it is ready to access:

- [Creating a Google Bucket for Media Manager](#) on page 42
- [Creating an Azure Blob for Media Manager](#) on page 46

- [Creating an Amazon S3 bucket for Media Manager](#) on page 50

### Procedure

1. Go to the **Configuration** view.
2. In **Call Storage Type**, select **Hosted Storage Type**.
3. In **Hosted Storage Type**, select the required external storage.
4. Enter the configuration settings as per the selected type of external storage. See [Hosted Storage Type Configuration settings](#) on page 22.
5. Click **Test Connection**.
6. Click **Save**.

### Result

- All new recordings are stored in the configured external storage.

### Related links

[Using Google Cloud bucket storage](#) on page 42

[Using Azure Blob storage](#) on page 46

[Using Amazon S3 storage](#) on page 50

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## Configuring an Amazon S3 archiving connector

### About this task

After configuring an Amazon S3 storage folder, you can use the following process to use it as a connector for archiving call recordings from the primary call storage folder.

### Before you begin

Ensure you have an Amazon S3 container, access key, and secret key. See [Creating an Amazon S3 bucket for Media Manager](#) on page 50.

### Procedure

1. Log in to **Web Manager** on the server hosting Media Manager.
2. Click **Applications > Media Manager > Connectors**.
3. Click **Add**.
4. Select **Amazon S3 Bucket**.
5. On the Add Amazon S3 Storage Connector window, in the **Name** field, type the name of the connector.
6. Enter **Bucket Name**.
7. Enter the **Parent Folder** name.
8. Enter **User Access key ID**.

9. Enter **User Secret access Key**.
10. Use the **Encrypt Recording** setting to select whether recordings should be encrypted.  
Note, you cannot set **Encrypt Recording** back to **NO** after saving the connector.
  - If encrypted, recordings can only be replayed from IP Office menus. Recordings are unencrypted when downloading from an IP Office menu.
  - If unencrypted, you must ensure that access to recordings in the archive complies with local data protection and privacy requirements.
11. Click **Test Connection**. If connection is successful, click **Create**. Otherwise, check and adjust the settings as required.
12. To start using the connector for archiving, select the connector from the **Active Connector** field and click **Update**.

## Result

- Media Manager will regularly copy new recordings from the primary call storage folder to the archive storage.

## Related links

[Using Amazon S3 storage](#) on page 50

# Part 4: Recordings and Alarms

# Chapter 12: Administering Recordings

The following processes can be performed by administrators who have access to Media Manager (see [Configuring Media Manager Access](#) on page 55).

## Related links

- [Configuring Media Manager Access](#) on page 55
- [Accessing the recordings](#) on page 57
- [Recordings Details](#) on page 58
- [Searching recordings using the search text box](#) on page 59
- [Filtering the recordings displayed](#) on page 60
- [Playing a call recording](#) on page 61
- [Downloading recordings](#) on page 61
- [Verifying authentication of call recordings](#) on page 62
- [Deleting recordings](#) on page 63

---

## Configuring Media Manager Access

Recordings can be accessed at 2 levels:

| Access Level                 | Description  |
|------------------------------|--|
| <b>System Administrators</b> | Administrators can access and manage all recordings. They do so through the IP Office Web Manager application. <ul style="list-style-type: none"><li>• Administrators can be given access recordings and Media Manager configuration settings or to recordings only. See <a href="#">Providing administrator access to Media Manager</a> on page 56.</li></ul> |
| <b>Extension Users</b>       | Individual users can be allowed to access recordings using the User Portal application. User configuration includes setting what recordings the user can access and whether they can download recordings. See <a href="#">Configuring user access through the user portal</a> on page 56.  |

## Related links

- [Administering Recordings](#) on page 55
- [Providing administrator access to Media Manager](#) on page 56
- [Configuring user access through the user portal](#) on page 56

## Providing administrator access to Media Manager

### About this task

Use this procedure to control administrator access to Media Manager. The settings are applied by the security **Rights Group** to which the administrator belongs.

Note that the settings can include permissions to access other settings and services. This section only covers the minimum necessary for Media Manager access.

### Procedure

1. Start IP Office Manager.
2. Select **File > Advanced > Security Settings**.
3. From the list of systems displayed, select the system hosting the Media Manager service.
4. Select the **Rights Group** that you want to alter.
5. For Media Manager access, ensure the rights group has the following minimum rights:
  - a. On the **Web Services** tab, select **Config Read All**.
  - b. On the **External** tab, select either **Media Manager Administrator** or **Media Manager Standard**.
    - **Media Manager Standard** – This option allows members of the rights group to only access **Recordings** menu to search, play and download recordings. They can view the other Media Manager menus but cannot use the controls on those other menus.
    - **Media Manager Administrator** – This option allows members of the rights group to access all Media Manager menus and settings.
6. Click **OK**.
7. Click .

### Related links

[Configuring Media Manager Access on page 55](#)

## Configuring user access through the user portal

### About this task

Administrators can provide end users with access to recordings using the User Portal application. Refer to the [Using the IP Office User Portal](#) user guide.

### Procedure

1. Log on to the Web Manager interface.
2. Click **Call Management > Users**.
3. Click the  icon next to the user to whom you want to provide Media Manager access.
4. In the navigation pane, click **User Portal**.
5. Click **Enable User Portal** if not enabled already.

6. Click **Enable Media Manager Replay**.
  7. Click one of the following:
    - **Replay All Recordings** – This option allows the user to access all call recordings.
    - **Replay Own Recordings** – This option allows the user to access their own call recordings plus any specified using the following settings:
      - **Replay Recordings For Group** – Add those groups for which the user can access group recordings. The user does not need to be a member of the group.
      - **Others** – Enter a list of line numbers, account numbers and user extension numbers, separated by semi-colons. The list can be up to 128 characters long.
  8. Click **Download Recordings** if you want the user to be able to download copies of recordings.
-  **Warning:**
- Downloaded recordings are unencrypted and outside the control of the Media Manager application including the audit trail. Therefore, you must ensure download recordings if assured that their storage and usage will continue to comply with local data protection and privacy requirements.
9. Click **Update**.

## Related links

[Configuring Media Manager Access on page 55](#)

# Accessing the recordings

## About this task

Media Manager allows administrators to use IP Office Web Manager to view details, play, delete and download.

- The recordings are stored in Opus file format, which is an audio format developed primarily for Internet streaming. The files can be played using Firefox, Microsoft Edge, Google Chrome and Safari browser (iOS 11 and macOS).
- Non-administrator users can access recordings using

## Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Recording**.
3. The system displays all the call recordings. See [Recordings Details on page 58](#) for details.

The screenshot shows the Media Manager interface with the following details:

| Call Date    | Length   | Parties     | Call Direct... | Agents             | Owner    | Targets     | Skills         | Call ID       | Actions |
|--------------|----------|-------------|----------------|--------------------|----------|-------------|----------------|---------------|---------|
| 2017-12-1... | 00:00:08 | 41018558... | Internal       | 41018558 (kanna... | 41018558 | 41018589    | Vkondreddy     | 0000000000... |         |
| 2017-12-1... | 00:00:31 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:04:23 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:02:36 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:05:39 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:12:51 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:00:05 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:06:39 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:06:43 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:00:35 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:11:29 | 41018234... | Internal       | 41018558 (kanna... | 41018558 | 41018558    | kinnaridalvi   | 0000000000... |         |
| 2017-12-1... | 00:00:39 | 41018558... | Outgoing       | 41018558 (kanna... | 41018558 | 91204101... | Not Applicable | 0000000000... |         |
| 2017-12-1... | 00:00:39 | 41018558... | Outgoing       | 41018558 (kanna... | 41018558 | 91204101... | Not Applicable | 0000000000... |         |

Displaying 1 - 50 of 241

## Related links

[Administering Recordings](#) on page 55

## Recordings Details

When displaying recordings, the following call details are displayed for each recording.

| Name                  | Description  |
|-----------------------|--|
| <b>Checkbox</b>       | The checkbox can be used to select multiple recordings followed by clicking <b>Delete</b> or <b>Download</b> to delete or download all selected recordings.  |
| <b>Call Date</b>      | The date of the call.  |
| <b>Length</b>         | The duration of the recording.   |
| <b>Parties</b>        | The users that participated in a conference call.  |
| <b>Call Direction</b> | The field indicates whether the call was Internal, Incoming, or Outgoing.  |
| <b>Agents</b>         | The agents involved in the call.   |
| <b>Owner</b>          | The owner of the recording. The owner is the extension or configuration item that triggered the recording of the call. <ul style="list-style-type: none"> <li>• User extension</li> <li>• Hunt group extension</li> <li>• Line number</li> <li>• Account code</li> </ul> |
| <b>Targets</b>        | The phone numbers of the recipients of the call.   |

*Table continues...*

| Name  | Description   |
|---|---|
| <b>Skills</b>   | The skill set of the agent involved in the call.  |
| <b>Call ID</b>  | The unique identification number associated with the call recording.  |
|  | This icon is shown if the recording includes VRLA authentication information. Click the icon to display a status message. See <a href="#">Verifying authentication of call recordings</a> on page 62. |
|  | Play the individual recording.  |
|  | Download the individual recording. See <a href="#">Downloading recordings</a> on page 61.   |

## Related links

[Administering Recordings](#) on page 55

# Searching recordings using the search text box

## About this task

You can use the search box at the top of the screen to search for specific recordings.

## Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Recording**.
3. In the search field, type the values for the following. To type more than one value, separate each value with a comma:
  - **Parties**.
  - **Agents**.
  - **Owner**.
  - **Target**.
  - **Skills**.
  - **Call ID**.
4. Click the  icon.
5. The system displays all the recordings matching your search criteria.

## Related links

[Administering Recordings](#) on page 55

## Filtering the recordings displayed

### About this task

When displaying recordings, you can use the search filters shown on the left to display only recordings that match your criteria.

### Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Recording**.
3. Set the filter options as required. For details of the filters, see [Filter Options](#) on page 60.
4. Click **Apply Filter**. The system displays the recordings matching your search filter criteria.
5. To remove the filter, click **Show All**.

### Related links

[Administering Recordings](#) on page 55

[Filter Options](#) on page 60

## Filter Options

The following options can be used when applying a filter (see [Filtering the recordings displayed](#) on page 60) to the recordings.

| Name                                   | Description  |
|--|--|
| <b>Recording Range (Date and Time)</b> | The date and time range between which the call was recorded. Use the calendars to select the dates and the adjacent drop-down menus to specify the time.   |
| <b>Recording Length</b>                | The length of the recording. Select one of the signs and enter the time in seconds. The available signs are: <ul style="list-style-type: none"> <li>• = Equal to the recording length you have specified.</li> <li>• &lt; Less than the recording length you have specified.</li> <li>• &gt; Greater than the recording length you have specified.</li> <li>• &gt;= Greater than or equal to the recording length you have specified.</li> <li>• &lt;= Less than or equal to the recording length you have specified.</li> </ul> |
| <b>Call Direction</b>                  | The direction of the call, that is, whether the call is <b>Internal</b> , <b>Incoming</b> , or <b>Outgoing</b> .   |
| <b>Parties</b>                         | The parties involved in the call. For more than one party, type the names separated by a comma.  |
| <b>Agents</b>                          | The agents involved in the call. For more than one agent, type the names of agents separated by a comma.   |
| <b>Target Number</b>                   | The phone number of the recipient of the call.   |
| <b>Skills</b>                          | The skill set of the agent involved in the call.   |
| <b>Call ID</b>                         | The unique identification number associated with the call recording.   |

## Related links

[Filtering the recordings displayed](#) on page 60

# Playing a call recording

## About this task

You can play recordings from the displayed list.

## Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Recording**.
3. If necessary, search the recordings to show the recordings required (see [Searching recordings using the search text box](#) on page 59 and [Filtering the recordings displayed](#) on page 60).
4. To play a recording, click the ▶ icon adjacent to the recording. A playback panel is displayed at the top of the menu and can be used to control the playback of the selected recording.



## Related links

[Administering Recordings](#) on page 55

# Downloading recordings

## About this task

You can download recordings from Media Manager.

- You can only download up to 50 recordings at a time.
- The files are downloaded in **OPUS** file format.

### Warning:

- Downloaded recordings are unencrypted and outside the control of the Media Manager application including the audit trail. Therefore, you must download recordings if assured that their storage and usage will continue to comply with local data protection and privacy requirements.

## Procedure

1. Log on to the **Web Manager** interface.

2. Click **Applications > Media Manager > Recording**.
3. If necessary, search the recordings to show the recordings required (see [Searching recordings using the search text box](#) on page 59 and [Filtering the recordings displayed](#) on page 60).
4. Do any one of the following:
  - To download a single recording, click the  icon next to the recording.
  - To download multiple recordings, select the check box next to the recording you want to download and then click **Download**.
    - The files are downloaded as a zipped file.
    - The zip file includes a HTML file containing call details for each recording. When the zip file is unpacked to a folder, you can open the HTML file in a browser to see file details and playback the downloaded recordings.

#### Related links

[Administering Recordings](#) on page 55

---

## Verifying authentication of call recordings

#### About this task

All recordings stored by Media Manager include a unique checksum value based on the original contents of the file. If the file is edited or changed in anyway, that checksum is no longer valid.

#### Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Recording**.
3. If necessary, search the recordings to show the recordings required (see [Searching recordings using the search text box](#) on page 59 and [Filtering the recordings displayed](#) on page 60).
4. To check the status of the recording authentication, click the  icon. The system displays one of the following messages:
  - Selected Record is VRLA authenticated.
  - Selected Record is not VRLA authenticated.

#### Related links

[Administering Recordings](#) on page 55

---

# Deleting recordings

## About this task

Use this procedure to delete unwanted recordings from Media Manager. The recordings are deleted from the local storage and the metadata of the deleted recordings are erased from the database. Recordings stored at remote locations cannot be deleted.

## Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Recording**.
3. If necessary, search the recordings to show the recordings required (see [Searching recordings using the search text box](#) on page 59 and [Filtering the recordings displayed](#) on page 60).
4. Do any one of the following:
  - To delete a recording, select the recording and click the **Delete**.
  - To delete multiple recordings, select the check box next to the recordings you want to delete and click **Delete**.
5. Click **Yes** when you are prompted to confirm.

## Related links

[Administering Recordings](#) on page 55

# Chapter 13: Using the Audit Trail

The Audit trail feature in Media Manager keeps track of the activities around the recordings in the library. For example, using the audit trail you can track who:

- Searched for a recording
- Replayed a recording
- Downloaded a recording
- Deleted a recording

For each event, the audit trail displays the username, date, time, and action. The audit trail is maintained for a predefined number of days set in the application settings.

## Related links

- [Viewing the Audit Trail](#) on page 64  
[Exporting the Audit Trail](#) on page 65

---

## Viewing the Audit Trail

### About this task

The **Audit Trail** menu is available administrators. Administrators can set the Retention days using the **Audit Retain Period (Days)** field in the Configuration screen.

### Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Audit**.
3. Use any of the following options separately or together. Do the following to search and filter customize the recordings search results:
  - Use the calendars to set the **Start Date** and the **End Date**.
  - Click **Event Type** and select the type of events you want to include in the Audit trail.
  - In the **Search on ‘User Name’** box, type a **User Name**, and click the **Search** icon.
4. Click **Apply Filter**.

### Result

The **Audit Tail** displays all the recordings matching your filter criteria.

**Related links**

- [Using the Audit Trail](#) on page 64  
[Audit field descriptions](#) on page 65

## Audit field descriptions

| Name                         | Description   |
|------------------------------|---|
| <b>Search on “User Name”</b> | The text box to search the audit records of users. Type the username to search the users' activities in the recording library.        |
| <b>User Name</b>             | The name of the user who used the recording.  |
| <b>Timestamp</b>             | The time when the recording was used.   |
| <b>User Action</b>           | The type of user action on a recording. This specifies whether a recording was replayed, downloaded, deleted, or searched.            |
| <b>Details</b>               | The details of a recording, such as the owner of the recording, the media name, and the calling party name.                           |
| <b>Start Date</b>            | The date after which the event occurred. Use the calendars to select the dates and the adjacent drop-down menus to specify the time.  |
| <b>End Date</b>              | The date before which the event occurred. Use the calendars to select the dates and the adjacent drop-down menus to specify the time. |
| <b>Event Type</b>            | The type of events to view. The available event types are: <b>Delete</b> , <b>Download</b> , <b>Replay</b> and <b>Search</b> .        |
| <b>Export</b>                | The option to export the filtered audit results as a compressed CSV file on your computer.  |

**Related links**

- [Viewing the Audit Trail](#) on page 64

## Exporting the Audit Trail

**Procedure**

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Audit**.
3. Use the filter options as required to customize your search results.
4. Click **Apply Filter**.

The **Audit Trail** displays all the recordings matching your filter criteria.

5. Click **Export**.
6. In the **Exports records** dialog box, type a password.
7. Click **Export**.

## Result

Media Manager exports the file as a zipped compressed and password -protected CSV file to your computer.

## Related links

[Using the Audit Trail](#) on page 64

# Chapter 14: Alarms and notifications

IP Office Media Manager can provide notification about alarms and events to an email account configured on the **Applications > Media Manager > Configuration** screen (see [Configuring Media Manager](#) on page 18).

The table below lists the basic alarms. The items in { } brackets are replaced with actual values in the alarms sent.

| Error Type             | Possible Alarm Text   |
|------------------------|---|
| DISK_SPACE_ERR<br>OR   | <ul style="list-style-type: none"><li>Failed to calculate disk space</li><li>Not enough space on the local disk available for Media Manager. Will attempt to free {0} GB.</li><li>Failed to rename file {fileName1} to {fileName2}.</li></ul> |
| FILE_PARSE_ERR<br>OR   | <ul style="list-style-type: none"><li>Failed to parse file {fileName}. due to unsupported file format.</li></ul>  |
| FILE_ENCODE_ER<br>ROR  | <ul style="list-style-type: none"><li>Failed to encode file {fileName} from codec {1} to {fileName2}.</li></ul>   |
| CONFIGURATION_ERROR    | <ul style="list-style-type: none"><li>System configuration for attribute {attributename} is invalid.</li></ul>  |
| SYSTEM_RESTART         | <ul style="list-style-type: none"><li>Service restarted on {service time}</li><li>Service started on {service time}</li><li>Service shutdown on {service time}</li></ul>  |
| FILE_ERROR             | <ul style="list-style-type: none"><li>Failed to delete file(s).</li><li>Failed to copy file {fileName1} to {fileName2}.</li></ul>   |
| INTERNAL_SERVICE_ERROR | <ul style="list-style-type: none"><li>Failed to start internal service {service time}.</li><li>Failed to stop internal service {service time}.</li></ul>  |
| CONFIGURATION_CHANGED  | <ul style="list-style-type: none"><li>Media Manager application configuration is changed.</li></ul>   |

## Related links

[Viewing alarms](#) on page 68

---

## Viewing alarms

### Procedure

1. Log on to the **Web Manager** user interface.
2. Click **Applications > Media Manager > Alarms**.

The system displays all the available alarms with descriptions.

### Related links

[Alarms and notifications](#) on page 67

[Alarms](#) on page 68

## Alarms

### Applications > Media Manager > Alarms

| Name        | Description  |
|-------------|--|
| Date        | The date on which the alarm was generated.   |
| Severity    | The severity of the alarm. The options are <b>Information</b> , <b>Warnings</b> , <b>Minor Alarms</b> , <b>Major Alarms</b> , and <b>Critical Alarms</b> . |
| Description | A brief description about the alarm.   |

### Related links

[Viewing alarms](#) on page 68

# Part 5: Miscellaneous

# Chapter 15: Migrating recordings to different storage

You can now manually transfer the media recordings from between different primary storage options.

- You must ensure that the new storage has the same folder structure as the original storage.
- After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

## Related links

- [Migrating recordings from HDD to Google Cloud Bucket](#) on page 70
- [Migrating recordings from HDD to Amazon S3 Bucket](#) on page 71
- [Migrating recordings from HDD to Azure Blob](#) on page 71
- [Migrating recordings from Google Cloud to HDD](#) on page 71
- [Migrating recordings from Google Cloud to Azure Blob](#) on page 72
- [Migrating recordings from Google Cloud to Amazon](#) on page 72
- [Migrating recordings from Azure to HDD](#) on page 72
- [Migrating recordings from Azure to Google](#) on page 73
- [Migrating recordings from Azure to Amazon](#) on page 73
- [Migrating recordings from Amazon to HDD](#) on page 73
- [Migrating recordings from Amazon to Google](#) on page 74
- [Migrating recordings from Amazon to Azure](#) on page 74

---

## Migrating recordings from HDD to Google Cloud Bucket

Use the following process to migrate the primary storage from HDD to Google.

1. Upload the folder to the parent folder in the bucket using Google Cloud Platform (GCP) **Upload Folder** feature.
2. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

## Related links

- [Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from HDD to Amazon S3 Bucket

Use the following process to migrate the primary storage from HDD to Amazon.

1. Upload <call-storage-path> folder to AWS bucket using s3 console. See [Uploading objects](#).
2. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from HDD to Azure Blob

Use the following process to migrate the primary storage from HDD to Azure.

1. Download and set up azcopy tool to linux system to which HDD is connected. See [Get started with AzCopy](#).
2. Copy all the media files from NAS to Azure Blob use command `./azcopy copy "/additional-hdd#1/*" "`. Add your container name and SAS token to the web address for the path to work. <https://byosstorage123.blob.core.windows.net/mycontainer?<SAS-Token>>. For more details, see [Upload files to Azure Blob storage by using AzCopy](#)
3. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Google Cloud to HDD

Use the following process to migrate the primary storage from Google to HDD.

1. Download the folder from the bucket and add it to the desired location in the HDD
2. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

## Migrating recordings from Google Cloud to Azure Blob

Use the following process to migrate the primary storage from Google to Azure.

1. Follow the steps given in the documentation to authorize GCP and Azure. See [Copy data from Google Cloud Storage to Azure Storage by using AzCopy](#)
2. Copy folders inside the parent folder in Azure Blob storage container.
  - <https://storage.cloud.google.com/<bucket-name>/<parent-folder-name>>
  - <https://<storage-account-name>.blob.core.windows.net/<container-name>>
3. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Google Cloud to Amazon

Use the following process to migrate the primary storage from Google to Amazon.

1. Install AWS CLI and configure your AWS credentials in your GCP. See [Installing, updating, and uninstalling the AWS CLI](#) for installing AWS CLI and [Configuring the AWS CLI](#) to configure AWS CLI
2. Go to any instance or cloud shell in GCP.
3. Use gsutil tool and type your storage name and bucket name the following command:  
`gsutil -m rsync -rd gs://<storagename> s3://<bucketname>`.
4. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Azure to HDD

Use the following process to migrate the primary storage from Azure to HDD.

1. Download the folder from the blob and add it to the desired location in the HDD
2. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Azure to Google

Use the following process to migrate the primary storage from Azure to Google.

1. Create a SAS token for Azure Storage Account, see [Use GCP Data Transfer Service import data from Azure Blob](#)
2. Use the GCP Data transfer Service.
3. Select the source as Azure container
4. Add Storage Account Name, Container Name and SAS token.
5. Select the destination bucket.
6. Start the transfer.
7. Set the parent folder name in Media Manager configuration to the folder where the azure files are copied.
8. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Azure to Amazon

Use the following process to migrate the primary storage from Azure to Amazon.

1. Using azcopy, download the blob from azure storage to a local folder. See SAS token in the following web address for the path to work.<https://mmbios.blob.core.windows.net/mm-recording-primary?<SAS-token>>.
2. Upload the folder to the AWS bucket using the S3 console.
3. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

### Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Amazon to HDD

Use the following process to migrate the primary storage from Amazon to HDD.

1. Download the folder from the bucket and add it to the desired location in the HDD
2. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

## Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Amazon to Google

Use the following process to migrate the primary storage from Amazon to Google.

1. Create a SAS token for Azure Storage Account, see [Use GCP Data Transfer Service import data from Azure Blob](#).
2. Use the GCP Data transfer Service.
3. Select the source as Azure container
4. Add Storage Account Name, Container Name and SAS token.
5. Select the destination Bucket.
6. Start the transfer.
7. Set the parent folder name in Media Manager configuration to the folder in which the azure files are copied.
8. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

## Related links

[Migrating recordings to different storage](#) on page 70

---

## Migrating recordings from Amazon to Azure

Use the following process to migrate the primary storage from Amazon to Azure.

1. Download and set up azcopy tool of Microsoft and add the command `azcopy cp`. See [Migrate AWS S3 buckets to Azure blob storage](#).
2. After migrating, you must configure the new storage settings to access the recordings. See [Configuring Media Manager](#) on page 18.

## Related links

[Migrating recordings to different storage](#) on page 70

# Chapter 16: Contact Recorder Migration

IP Office Release 11.0 and later do not support Contact Recorder. However, existing customers of Contact Recorder can migrate their call record database to Media Manager. ContactStore migration is not supported.

The migration process only migrates the information about the existing recordings and where they are located. It does not move the actual recordings. Media Manager becomes a single interface for all call records, whether archived through Media Manager for newer recordings or the older recordings archived through Contact Recorder.

## Note:

You must take a backup of the Contact Recorder database before upgrading your IP Office to Release 11.0 or later. Once you upgrade IP Office to Release 11.0 or later, you will not be able to access or back up the Contact Recorder database.

## Migration of Connectors

During migration, IP Office also migrates the connectors that are configured with Contact Recorder. Since Contact Recorder does not have a naming system for connectors, Media Manager adds a time stamped name to the migrated connectors. The name is in the format MigratedX-Timestamp.

## Migrating multiple times

Normally, migration is completed in one attempt and a summary of the migration is provided on the user interface. However, in case of a network failure or system shutdown midway through a migration, administrators can perform the migration again. If migration is initiated for a second time, IP Office identifies and removes the migrated data from the previous unsuccessful migration before starting. Migrated connectors are deleted unless they have already been renamed.

## Availability of Contact Recorder features in Media Manager

| Feature                       | Description  | Contact Recorder | Media Manager |
|-------------------------------|--|------------------|---------------|
| Search by administrator       | Search by administrators using Target Number, Skills, Agent, and Call ID           | ✓                | ✓             |
| Search through Web Self-Admin | Search by users using the search filters Target Number, Skills, Agent, and Call ID | ✓                | ✓             |
| Web Self-Admin search results | A maximum of 100 results are displayed.  | ✓                | ✓             |

*Table continues...*

| Feature                       | Description   | Contact Recorder | Media Manager                    |
|-------------------------------|---|------------------|----------------------------------|
| Call sets                     | Facility to save search results for retrieving in the future. | ✓                | ✗                                |
| Email                         | Attaching recordings to emails.                               | ✓                | ✗                                |
| Bulk Export                   | Exporting multiple recordings and the related details         | ✓                | ✓<br>Maximum 50 calls at a time. |
| Owner                         | Available as a search option.                                 | ✗                | ✓                                |
| Audit Trail                   | Available for tracking the use of recordings.                 | ✓                | ✓                                |
| Windows Domain Authentication | -   | ✓                | ✗                                |

## Related links

[Migration limitations](#) on page 76

[Migration prerequisites](#) on page 77

[Initiating Contact Recorder migration](#) on page 77

## Migration limitations

IP Office Release 11.0 and later has the following limitations while migrating Contact Recorder database to Media Manager:

- Alarms and system configuration data such as Call storage path and SMTP Configuration are not migrated.
- Connector passwords are not migrated. IP Office sets the password to blank during migration. Administrators must configure the Connectors after migration is complete.
- Contact Recorder allows one media file to be archived at multiple remote locations. Since Media Manager supports only one Active Connector, it keeps the latest Connector associated with a media file.

## Related links

[Contact Recorder Migration](#) on page 75

## Migration prerequisites

- Since IP Office Release 11.0 and later do not support Contact Recorder, you must back up Contact Recorder prior to upgrading your IP Office.
- If you have your Contact Recorder on your primary hard disk, you must provision a secondary HDD before migrating to Media Manager as Media Manager supports only secondary HDD to store the media files. After migration, the recordings must be moved to the secondary HDD and the Call Storage Path must be updated to a partition on the secondary HDD.
- The secondary HDD must be activated through the Web Control menus. For more information on adding secondary HDD and activating the HDD, see [Activating additional hard drives](#) on page 16.
- Administrator initiating the migration must have Media Manager Administrator rights.
- Media Manager and Contact Recorder must be on the same server.

### Related links

[Contact Recorder Migration](#) on page 75

---

## Initiating Contact Recorder migration

### Before you begin

Ensure you have backed up the Contact Recorder database before upgrading to IP Office Release 11.0 or later releases.

### Procedure

1. Log on to the **Web Manager** interface.
2. Click **Applications > Media Manager > Migration**

IP Office prompts you to confirm migration of your Contact Recorder database.

3. Click **Yes** to confirm.

IP Office displays a message Media Manager migration has started and shows the completion percentage of migration. After the migration process is over, a summary of the process is provided.

### Next steps

- The **Call Storage Path** does not get migrated. Administrators must ensure that the **Call Storage Path** for Media Manager and Contact Recorder are the same. If they are different, media files from the Contact Recorder **Call Storage Path** must be copied to the Media Manager **Call Storage Path** while maintaining the internal directory structure of Contact Recorder. This ensures playback of the recordings archived through Contact Recorder.
- If any NAS configuration has been migrated, administrators must configure the password for the NAS after migration.

## Contact Recorder Migration

- Administrators must select an Active Connector to be used for remote archiving.

### Related links

[Contact Recorder Migration](#) on page 75

# Part 6: Further Help

# Chapter 17: Additional Help and Documentation

The following pages provide sources for additional help.

## Related links

- [Additional Manuals and User Guides](#) on page 80
- [Getting Help](#) on page 80
- [Finding an Avaya Business Partner](#) on page 81
- [Additional IP Office resources](#) on page 81
- [Training](#) on page 82

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## Additional Manuals and User Guides

The [Avaya Documentation Center](#) 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 [Avaya IP Office™ Platform Manuals and User Guides](#) document.
- The [Avaya IP Office Knowledgebase](#) and [Avaya Support](#) 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 [Avaya Documentation Center](#).

For other types of documents and other resources, visit the various Avaya websites (see [Additional IP Office resources](#) on page 81).

## Related links

- [Additional Help and Documentation](#) on page 80

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## 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 [Finding an Avaya Business Partner](#) on page 81.

#### Related links

[Additional Help and Documentation](#) on page 80

## 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>
2. 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 80

## Additional IP Office resources

In addition to the documentation website (see [Additional Manuals and User Guides](#) on page 80), 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, you can customize the portal to show specific products and information type that you want to see.

- [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>)

## Additional Help and Documentation

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) (<https://support.avaya.com/forums/index.php>)

This site provides forums for discussing product issues.

- [International Avaya User Group](https://www.iuag.org) (<https://www.iuag.org>)

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

- [Avaya DevConnect](https://www.devconnectprogram.com/) (<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/) (<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 80

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## 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 80

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