# Video Messaging

**Note** Cisco Media Sense is now end of life and end of support, hence Unity Connection will no longer provide the Video Messaging feature for users.For more information on Cisco Media Sense EOL, see https://www.cisco.com/c/en/us/products/collateral/customer-collaboration/mediasense/eos-eol-notice-c51-738857.html.

Beginning with Unity Connection 11.5(1) and later, in addition to audio message, a user or an outside caller can also send video message to another user using video enabled endpoint. To record and send a video message, make sure that:

- Video messaging is enabled in Unity Connection for the user.
- Endpoint is video enabled.

For more information on supported video endpoints, see the Video Compatibility Matrix section of the *Compatibility Matrix for Cisco Unity Connection* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/compatibility/matrix/b_cucclientmtx.html.

A user or an outside caller can send video message to another user only in case of Ring No Answer (RNA). If a video enabled user dials a call handler extension, the call remains an audio call as the call handler neither has a video service account nor it is associated with any class of service.

**Note** Once a user is signed in to Unity Connection, even if the video messaging is enabled for a user, the user can not compose a video message. The user can only play the video messages received from the users or outside callers through RNA scenarios.

Consider the following figure showing the video messaging architecture when a user or outside caller sends a video message to the other user in case of RNA.

**Figure 1: Video Messaging Architecture**
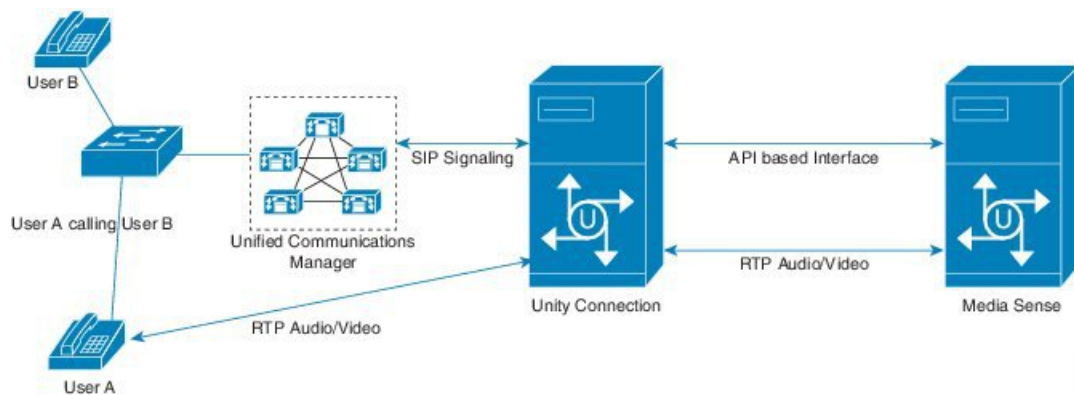


In the above figure, a user or an outside caller that is User A dials the extension of User B but User B does not answer the call, which means RNA. Now the call is forwarded to the mailbox of User B configured on Unity connection and the video greeting of User B is played back. After the greeting is played, User A records and sends the video message to User B and the message gets stored in mailbox of User B. To access the video message sent by User A, User B sign-ins to the mailbox on Unity Connection and accesses the video message.

> **Note** If a video messaging enabled user or outside caller records a message, it completely depends upon the endpoint if the video call will be established or not. For example, if the user records a message on Cisco 8865 or 8845 series video phone with the camera shutter closed, no video streaming happens for the message. But for other endpoints, a blank video is recorded.

For information managing video messages, see "Managing Video Messages" chapter of *User Guide for the Cisco Unity Connection Phone Interface* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/15/user/guide/phone/b_15cucugphone.html.

Video messaging is also supported if the Attempt Sign-In, Sub Sign-In, Attempt Forward and Greetings Administrator routing rule is set for the user.

# Video Greeting

Video greeting feature allows the user to record a greeting in video format from a video-enabled end point. A user or an outside caller can access the video greetings only when calling from a video enabled endpoint (for example, a telephone with video display) to a video enabled user mailbox in Unity Connection. However, when calling from a non video enabled endpoint, the callers can only access the audio part of the video greetings. Video greetings for outside callers is enabled through the class of service of the subscribed users.

You can record and play the following six types of personal video greetings:

- Standard
- Busy
- Alternate
- Internal
- Closed
- Holiday

**Note** Error greetings are played as audio only.

# Platform support for Video

The video messaging is supported only with 7 vCPU OVA. Each Unity Connection server (standalone or cluster) can support up to 20 concurrent video calls.

MediaSense must also be deployed using the larger 7vCPU OVA. The MediaSense needs to be installed as a single server and cannot be part of a cluster. A Unity Connection cluster or a single server can be integrated with a MediaSense server.

**Note** The video messaging is supported in both co-located Unity Connection active-active cluster deployment and Unity Connection active-standby cluster deployment over the WAN. The video messaging is not supported in an active-active cluster deployment over the WAN.

The MediaSense server must be co-located with Unity Connection with 1Gbps connectivity between the servers and less than 10ms Round Trip Time (RTT) latency. Unity Connection will be profiling further for bandwidth and higher latency links in later releases to allow for a wider range of deployment options.

**Note** While recording a video message, if the communication between Unity Connection and MediaSense is lost, the call gets converted to audio. If a video call is converted to audio because of no response from MediaSense, it cannot be restored again as a video.

# Blanking Files

Due to differing behavior of some video devices, the 'blanking' file is used for the video messaging feature. The blanking file fills in the video RTP stream when Unity Connection and MediaSense would otherwise not be sending video. Without the blanking file, users may either experience video window closing on the device or the last received video frame freezing on the screen.

There is a sample blanking file located at
http://www.ciscounitytools.com/Applications/MediaSense/VideoBlankingFiles/

This file needs to be uploaded to the MediaSense that Unity Connection is integrated with the following information:

Title: CiscoUnityConnectionLogo.mp4

Description: <Enter a brief description>

Filename: CiscoUnityConnectionLogo.mp4

The blanking file must be an MP4 video file with a resolution 640x360 (360p) using H.264 codec at 30 frames per second. The blanking file needs to include an empty or null audio track. MediaSense requires an audio track; however silence is preferred for the blanking file so it does not distract the user during the use of the video messaging.

Due to the Cisco Unified Communications Manager regions settings in the Video Operation section, the blanking files of video greetings and messages should be recorded at an average or constant bit rate of 600kbps to allow the administrator to better calculate the bandwidth requirements of the video messaging deployment.

# Video Operation

Unity Connection supports video messaging only with SIP trunk integrations. MediaSense and Unity Connection allows the recording of video greetings and messages up to 1080p (1920x1080), however this offers limited compatibility across the video-enabled phone portfolio and is not a supported configuration as MediaSense does not support transcoding video to reduce the resolution for non-1080p video devices. To restrict video greetings and messages to 360p, Unity Connection leverages the use of Communications Manager's Region configurations. The Unity Connection SIP Trunks need to be put in a region that has the following relationship settings with all other regions containing video-enabled devices that might call Unity Connection and expect video greetings and messages:

Audio Codec Preference List: (Default or Administrator's Preference)

Maximum Audio Bit Rate: 64 kbps

Maximum Session Bit Rate for Video Calls: 600kbps

Maximum Session Bit Rate for Immersive Video Calls: 600kbps

In Unity Connection 10.5(2) and later, the administrator can configure any of the following supported video resolution:

- 360p (640x360)

- 480p (720x480)

- 720p (1280x720)

- 1080p (1920x1080)

The new supported video resolutions allow Unity Connection to support various video-enabled phone portfolio, however, MediaSense does not support video transcoding. The administrator needs to configure the video region settings in Cisco Unified CM, depending on the video resolution selected in Cisco Unity Connection Administration. To configure video resolution, navigate to Cisco Unity Connection Administration> Port Group> Port Group Basics> Change Advertising> Video Resolution.

For an active-standby Unity Connection cluster deployment over a WAN connection, use the following region settings for the SIP trunk to the Unity Connection server that is not co-located with MediaSense. This disables the video greetings using the secondary node. Audio-only greetings continue to function.

Audio Codec Preference List: (Default or Administrator's Preference)

Maximum Audio Bit Rate: 64 kbps

Maximum Session Bit Rate for Video Calls: Select "None"

Maximum Session Bit Rate for Immersive Video Calls: Select "None"

These settings ensure maximum compatibility across the Cisco video-enabled phone portfolio and provide the best possible experience for using video messaging.

When recording a video greeting or message, the audio and video RTP streams are both sent directly to Unity Connection. Unity Connection saves the audio RTP stream locally as an audio-only version of the video greeting or message and forks the audio and video RTP streams to MediaSense for recording. For playback, if the device is video-enabled, Unity Connection instructs MediaSense to stream the video greeting or message to Unity Connection to be forked to the device. If MediaSense is not available or unable to playback the video greetings or messages or if the device calling Unity Connection is not video-enabled, then Unity Connection plays the audio-only portion of the video greeting or message that it recorded. The audio-only greeting or message is the audio track from the video greeting or video message. It is possible to have different greetings for audio-only callers and video-enabled callers.

# Cisco VCS Interoperability

The Unity Connection team has not tested calling through a VCS or calling from devices registered to a VCS and as such, these call flows are not supported. At current, the Unity Connection team is aware of an issue with certain devices registered to a VCS where video is not negotiated and audio-only greetings are played or recorded. While not currently supported, Cisco Unified CM registered devices calling through a VCS are typically able to play and record new video messages or greetings.

# Video Greetings Enabled Call Handlers

With Unity Connection 11.x, user can record video greetings for call handlers. Audio and video greeting for the call handler can be recorded by the owner assigned to the call handler only.

# Limitations

Video messaging is not supported in below mentioned scenarios:

- IPv6 format
- Dispatch and Broadcast
- SCCP integration
- Voice User Interface (VUI )
- Cross-Box Transfer
- Cross-Box Login
- Directory handler
- Interview handler
- System call handler

For more information on enabling video messaging, see the Task List for Configuring Video Greetings and Massaging section of the "Video" chapter in the System Administration Guide for Cisco Unity Connection, Release 15, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/15/administration/guide/b_15cucsag.html.