



Release Notes for Cisco Media Experience Engine 3500 Release 3.2

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This document provides information about features and caveats for Cisco Media Experience Engine 3500 (Cisco MXE 3500) Release 3.2.

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Introduction

Cisco MXE 3500 is an appliance that provides comprehensive transcoding services and integrates into the network to deliver the following media processing capabilities:

- Video content to be shared across the network to virtually any type of endpoint
- Innovative post production features that transform ordinary video content into studio quality output
- Collaboration with other applications delivered by Cisco's suite of media products



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- Ingest of MPEG-2 Transport Streams (MPEG-2 video payload and AC3 or Layer II audio payload) and output of stream transcoded to WMV, Flash 8, or H.264 formats
- Extraction of an audio track from a video and performing speech-to-text transcription and graphic overlays (subtitles)

The Cisco MXE 3500 Resource Manager augments the capabilities of the Cisco MXE 3500 by intelligently load balancing job processing across multiple Cisco MXE 3500 devices and by delivering fault tolerance to deployment.

New Features

Cisco MXE 3500 Release 3.2 includes the following new features:

- **System Job Profiles**—Includes the following new system-level Job Profiles: Android, Blackberry, Flash, H.264, iPad, iPhone, and WMV. These Job Profiles are located in C:\Program Files\Cisco\Media Experience Engine\profiles.
- **Video Conversion Interface**—Enables end users to convert video easily and quickly among various encoding types, to add bumpers and trailers, and to upload automatically to Cisco Show and Share. The Video Conversion Interface is available at **http://mxe_IP_address**.

System administrators configure the options that are available to end users in the Video Conversion Interface. To support this configuration, Release 3.2 includes a new Job Profile space named **sui**. The SUI Job Profile space includes these Job Profiles—Android, Blackberry, Cisco DMP, Flash, H.264, iPad, iPhone, Show and Share, and WMV—which are located in C:\mxe\profiles\spaces\sui. To configure the SUI, select the **sui** Profile Space from **Tools > Select Profile Space** in the Web UI and then click **Administration > SUI Admin** in the Toolbox.

- **Live Streaming**—Supports output of MPEG-2 TS via multicast stream for H.264 Encoder Profiles.
- **Smart Ingest Mechanism**—Automatically detects certain features of videos, which reduces the number of necessary preprocessor profiles in the system and allows, for example, the SUI to use the same preprocessor profile regardless of job. You configure Smart Ingest in the Aspect Ratio Conversion and Watermarking areas of a Preprocessor Profile.
- **API**—Makes available MXE REST API GET commands and POST helper to automate workflow and supports Apache simple HTTP authentication. Cisco Show and Share integration requires HTTP authentication to be disabled.
- **Upgradability**—Supports backup and restore through the Web UI. You can restore a backup file only to the same Cisco MXE 3500 release, for example a backup file from Release 3.2.1 can be restored only to Release 3.2.1. This release also enables you to upgrade Cisco MXE 3500 through the Web UI to future releases. Access the backup, restore, and upgrade features from the **Tools** menu.
- **Configuration Menu**—Enables you to easily change network settings. You can now also change and synchronize the multiple system-level (not the Web UI admin password) admin passwords through the Configuration Menu. Access the Configuration Menu either by ESXi (requires physical connection to Cisco MXE 3500) or by SSH to ESXi (not available on first install).

Cisco MXE 3500 Release 3.2.1

Cisco MXE 3500 Release 3.2.1 is a maintenance release, and includes the following new features:

- **Active Directory Support**—Provides access control to shared folders using Enterprise credentials.
- **LDAP Support**—Provides access control to the Video Conversion Interface.
- **New Ingest Formats Support**—MOD, TOD, and MTS.

Browser Requirements

You must use one of following web browsers to access the Folder Attendant User Interface (UI) or Web UI:

- Firefox 3 or later. Firefox 3.5 is recommended.
- Internet Explorer 8 is supported.



Note

When accessing Cisco MXE 3500 UIs, set your display resolution to 1280 x 1024 pixels for best results, or you may encounter issues with scrolling and display (CSCsu29805).

For information about the Cisco MXE 3500 components, see the [User and Admin Guide for Cisco Media Experience Engine 3500](#).

Installation and Upgrade Requirements

The Cisco MXE 3500 is an appliance on which the Cisco MXE 3500 Release 3.0 software comes installed.

This section includes the following topics:

- [Cisco MXE 3500 Release 3.2.1, page 3](#)
- [Supported Deployment Models, page 4](#)
- [Licensed Features, page 4](#)
- [Important Notes, page 5](#)

Cisco MXE 3500 Release 3.2.1

The Cisco MXE 3500 Release 3.2.1 is only available as an upgrade bundle, and only for the Cisco MXE 3500 appliance already running Cisco MXE 3500 Release 3.2. It is applicable both to standalone and resource manager deployments. The licensed features remain the same as in Cisco MXE 3500 Release 3.2. No additional licenses are required to install Release 3.2.1.



Note

Perform a system backup before doing the system upgrade.



Note

This upgrade will override the Authentication Mode and Authentication Password. After completing the upgrade, go to the Cisco MXE 3500 UI. From the **Toolbox**, expand **Administration** and click **API Admin**. Configure the Authentication Mode and Authentication Password to the appropriate setting for your installation. See the API Administration section of the [User Guide for Cisco MXE 3500 Release 3.2](#) for more information on how to configure the Authentication Mode and Authentication Password.

Upgrading a standalone Cisco MXE 3500 and a Cisco MXE 3500 Resource Manager

See the Administrative Tasks chapter in the [User Guide for Cisco MXE 3500 Release 3.2](#) for information on how to upgrade to a new release of Cisco MXE 3500 software.

Upgrading a Cisco MXE 3500 Resource Node

Complete the following steps on each Resource Node to upgrade the Windows VM and Linux VM on a Resource Node:



Note You must upgrade the Windows VM first, then upgrade the Linux VM.

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- Step 1** Go to <http://www.cisco.com/cisco/software/type.html?mdfid=282815279&i=rm>.
- Step 2** Download upgrade-rn-3.2.1 to your computer and extract its contents to \\MXE_IP\\temp.
- Step 3** Verify that the following files and directory are present:
- upgrade-rn.bat
 - upgrade-rn.sh
 - bin
- Step 4** Upgrade Windows VM.
RDC to *mxe_IP_address*, navigate to c:\temp and run upgrade-rn.bat.
- Step 5** Upgrade Linux VM.
SSH to *mxe_IP_address*, navigate to /mnt/temp and run ./upgrade-rn.sh.
-

Supported Deployment Models

You can deploy Cisco MXE 3500 in the following two configurations:

- **Standalone Deployment**—This deployment consists of one or more Cisco MXE 3500 devices running as individual devices, each with its own license, user interfaces, job profiles, and so on. This deployment supports one predefined administrative user. See also the “[Licensed Features](#)” section on page 4.
- **Resource Manager Deployment**—This deployment consists of one or more Cisco MXE 3500 devices running as a single group with one set of user accounts, job profiles, licensed features, and user interfaces; additionally, this deployment includes the User Administration feature.

There are two types of Cisco MXE 3500 devices in a Resource Manager deployment: a single Cisco MXE 3500 Resource Manager and up to nine Cisco MXE 3500 Resource Nodes. The Resource Manager not only functions as a multidevice manager that load balances transcoding jobs across the Resource Nodes, but also functions as a Resource Node that performs transcoding jobs.

- A Resource Manager license is required for the first Cisco MXE 3500 in a cluster.
- A Resource Node license is required for each of the remaining Cisco MXE 3500s in a cluster.
- All members of a cluster must have the same option licenses.

See also the “[Licensed Features](#)” section on page 4.

Licensed Features

This release supports the following licensed features:

- **Base Software License (Required)**—Provides any media to any endpoint transformation.

- Cisco MXE Conversion User Interface (Optional)—Provides simple interface for end users to do transformation, post production, and upload to Cisco Show and Share.
- Graphics License (Optional)—Provides media post production capabilities.
- Live Streaming License (Optional)—Provides live streaming of IPTV and other IP stream sources (MPEG2TS). Now streams to Cisco Digital Signage.
- Speech To Text License (Optional)—Provides speech-to-text transcription.
- License Bundle (Optional)—Includes Graphics and Live Transcoding.

For details about obtaining a license file to enable the software for your deployment, see the *Deployment and Administration Guide for Cisco Media Experience Engine 3500*. This guide also provides information about installing a license, configuring the Cisco MXE 3500, upgrading from a standalone to a Resource Manager deployment, and troubleshooting deployments. You can access the guide at the following URL:

http://www.cisco.com/en/US/products/ps9892/prod_maintenance_guides_list.html



Note

Before you request a software license on Cisco.com for your deployment, see the *Deployment and Administration Guide for Cisco Media Experience Engine 3500* for licensing requirements.

Important Notes

Power Cords and Power Supplies

There is one power cord shipped with the Cisco MXE 3500, and one power supply. If the customer orders the redundant power supply, there are two power cords and two plugs in the chassis.

Standalone and Resource Manager Deployments

The proper configuration of Samba server generally ensures that directory locations are accessible from all Hosts for both standalone and Resource Manager devices.

File Formats

- A maximum of 8 audio tracks is supported with QuickTime format.
- Re-wrapping is supported only for MPEG Encoder with an MPEG-PS input file(CSCsu08447).

Job Profiles

Cisco MXE 3500 ships with preconfigured Job Profiles. A Job Profile is a template that defines how jobs are processed, and it contains the settings that are required to process jobs from beginning to end. Job Profiles are optimized for different types of input media, encoding output, and distribution, and they align with modern distribution devices, such as iPod, iTunes, and so on. See the “Standard Cisco MXE 3500 Job Profiles” section in the *User and Admin Guide for Cisco Media Experience Engine 3500* to learn more about the preconfigured Job Profiles.



Caution

We strongly recommend that you use the preconfigured Job Profiles and change settings only if you understand the consequences. Modifying preconfigured Job Profile settings or creating new Job Profiles with settings that media standards do not support can result in job processing failures or produce undesirable output.

User Interface

- The Live Capture feature using Capture Card hardware is not supported; related settings are nonfunctional (CSCsr96178).
- Tape jobs are not supported.
- Forensic Watermarking and Fingerprint features are not supported; therefore, related settings are nonfunctional.
- Configuration of Quicktime encoder setting is done through a direct access to the device, not through the Web UI. See the *User and Admin Guide for Cisco Media Experience Engine 3500* for more information.
- The User Administration and Profile Spaces features are not available with Cisco MXE 3500 standalone deployment. The User Administration feature is available only with a Resource Manager deployment. See also the [“Supported Deployment Models” section on page 4](#).

IP Capture

- The maximum supported resolution of input stream is 1080i, and only MPEG-2 encoding is supported for input payload. The maximum resolution of output stream is 720p.
- We recommend that you configure an IP Capture job to use the Immediate mode. Otherwise, as the IP Capture job progresses, an intermediate file that continuously grows is created, filling up the disk storage and affecting the operation of the device.
- Take care when archiving the output of an IP Capture job on the local disk storage of the device or on an external storage device. As the IP Capture job progresses, an archive file that continuously grows is created, filling up the disk storage and affecting the operation of the device or external storage device.

Speech to Text

- You can obtain an additional general speaker independent speech profile on Cisco.com in the **Video, Cable and Content Delivery > Media Experience Engines > Cisco MXE 3000 Series > Cisco MXE 3500 software download** area.
- We also recommended that the audio input is via a direct microphone /lapel microphone connection (LINE IN) to the camcorder/recording device. It is imperative that the video recording is carried out with quiet surroundings (low ambient noise). See [Guidelines for Improving the Accuracy of Speech to Text](#) in the *Deployment and Administration Guide for Cisco Media Experience Engine 3500* on [Cisco.com](#) for more information.

Feature Support Matrix

This section includes the following topics:

- [File-to-File Transcoding, page 7](#)
- [Live Streaming \(IP Capture\), page 7](#)

File-to-File Transcoding

[Table 1](#) lists the maximum number of input files that can be transcoded simultaneously into output files on a **single** Cisco MXE 3500.

Table 1 *Maximum Number of Files for Simultaneous File-to-File Transcoding on Cisco MXE 3500*

Video Resolution	Maximum Number of Simultaneous Input Files
Input: 1080p Output: 1080p	4 ¹
Input: 480p Output: 480p	9 ¹

1. For file-to-file transcoding using MPEG or H.264 encoder profiles with external multiplexer; Only one job can run at a time (CSCtf25130).

Live Streaming (IP Capture)

[Table 2](#) describes maximum number of jobs that can be run simultaneously on a **single** Cisco MXE 3500.

Table 2 *Maximum Number of Simultaneous Jobs for IP Capture on Cisco MXE 3500*

Encoder	Video Resolution	Output		
		IP Webcast Without Archive	IP Webcast With Archive	File
WMV	Input: 1080i Output: 720p	2	2	2 ¹
	Input: 720p Output: 720p	2	2	2 ¹
	Input: 480i (NTSC) Output: 480p	9	9	9 ¹
Flash 8	Input: 1080i Output: 720p	Not supported	Not supported	Not supported
	Input: 720p Output: 720p	1	1	1
	Input: 480i (NTSC) Output: 480p	9	9	9
H.264	Input: 1080i Output: 720p	Not supported	Not supported	Not supported
	Input: 720p Output: 720p	1	1	1
	Input: 480i (NTSC) Output: 480p	1	1	1

Table 2 **Maximum Number of Simultaneous Jobs for IP Capture on Cisco MXE 3500**

Real	Input: 1080i Output: 720p	Not available	Not available	1
	Input: 720p Output: 720p	Not available	Not available	1
	Input: 480i (NTSC) Output: 480p	Not available	Not available	—
Flash 7	Input: 1080i Output: 720p	Not supported	Not supported	1 ²
	Input: 720p Output: 720p	Not supported	Not supported	1 ²
	Input: 480i (NTSC) Output: 480p	Not supported	Not supported	1 ²
Quicktime	Input: 1080i Output: 720p	Not supported	Not supported	1 ²
	Input: 720p Output: 720p	Not supported	Not supported	1 ²
	Input: 480i (NTSC) Output: 480p	Not supported	Not supported	1 ²
MPEG-2	Input: 1080i Output: 720p	Not supported	Not supported	1 ³
	Input: 720p Output: 720p	Not supported	Not supported	1 ³
	Input: 480i (NTSC) Output: 480p	Not supported	Not supported	1 ³

1. WMV Encoder Complexity must be set to 0.
2. Works only in immediate mode, not in fast start mode. Limit the duration to only a few minutes, or RAM memory usage will exceed available memory, causing unpredictable behavior.
3. Available only in standalone configuration.

Caveats

This section includes the following topics:

- [Using the Bug Toolkit, page 9](#)
- [Open Caveats, page 9](#)
- [Resolved Caveats, page 10](#)

Using the Bug Toolkit

You can search for problems by using the Cisco Software Bug Toolkit. Known problems (bugs) are graded according to severity level.

Before You Begin

To access Bug Toolkit, you need the following:

- Internet connection
- Web browser
- Cisco.com user ID and password

Procedure

- Step 1** To access the Bug Toolkit, go to <http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs>.
- Step 2** Sign in with your Cisco.com user ID and password.
- Step 3** To look for information about a specific problem, enter the bug ID number in the Search for Bug ID field, then click **Go**.



Tip For information about how to search for bugs, create saved searches, create bug groups, and so on, click **Help** on the Bug Toolkit page.

Open Caveats

[Table 3](#) lists the open hardware caveats for Cisco MXE 3500 and includes Severity 1, Severity 2, and Severity 3 caveats.

Because defect status continually changes, this table provides a snapshot of the defects that were open at the time of the release. For an updated list of open defects, access the Bug Toolkit ([Step 1](#), above).

Table 3 *Open Caveats for Cisco MXE 3500*

Identifier	Severity	Component	Headline
CSCto56174	3	mxe_3500_webui	Fast Start Jobs fail in a Resource Manager deployment
CSCto59863	3	mxe_3500_ip_ingest	H.264 Mux Config File not accessible by Resource Node
CSCto33154	3	mxe_3500_webui	MXE UI allows multiple submission of back up from different instances
CSCtq49728	3	mxe_3500_webui	When changing the API commands, the current value is not reflected in the UI
CSCtq70490	3	mxe_3500_webui	Random "File too large" errors when uploading a 9 MB mpg file

Table 3 *Open Caveats for Cisco MXE 3500 (continued)*

Identifier	Severity	Component	Headline
CSCtr08420	3	mxe_installation	Upgrade to 3.2.1-2 wipes out API authentication mode used by Cisco Show and Share
CSCtr10170		mxe_3500_webui	Sometimes clicking on the Save button in LDAP and AD settings does not do anything
CSCtr36959	3	mxe_installation	AD settings need to be re-saved after changing the MXE hostname
CSCtk75064	3	mxe_3500_file_in	Closed caption for file-to-file not working

Resolved Caveats

[Table 4](#) lists the resolved caveats for Cisco MXE 3500.

Table 4 *Resolved Caveats for Cisco MXE 3500*

Identifier	Severity	Component	Headline
CSCtn24392	3	mxe_installation	FTP server configuration failure on resource node

[Table 5](#) lists the resolved caveats in Cisco MXE 3500 Release 3.2.1.

Table 5 *Resolved Caveats for Cisco MXE 3500 Release 3.2.1*

Identifier	Severity	Component	Headline
CSCto33045	3	mxe_3500_webui	No detail logging for backup process on UI and in log files
CSCtn24360	3	mxe_3500_webui	SUI: Error Message Position Shifted After Displaying Long Message
CSCtl94905	3	mxe_3500_webui	Unexpected error when saving FTP watch directory without enabling Passive Mode
CSCtq00926	3	mxe_installation	NTPD is not configured to auto-start at boot - runlevel is not set
CSCtq02835	3	mxe_installation	Unsupported exit from Linux Admin Utility causes high CPU usage
CSCtq05222	3	mxe_installation	When exiting from System Prompt (via CLI) it hangs. This happens at random times.
CSCtq49746	3	mxe_3500_webui	Real Media files are not placed properly
CSCtq49754	3	mxe_3500_webui	Download doesn't work from job status page

Patches


- [H264PatchZip](#), page 11
- [CSCtx46074.zip](#), page 11

H264PatchZip

This software patch addresses CSCty71814.

In a clustered deployment install the patch on the RM and each RN. Use the IP address of the RM appliance when applying the patch to the RNs.

Install Instructions

-
- Step 1** Download H264PatchZip.zip from <http://www.cisco.com/cisco/software/type.html?mdfid=282815279&flowid=29121>. Click on **Media Experience Engine Patches > Latest Releases > 3.3.1**.
- Step 2** Copy the patch to `\mxe_ip_address\media`, where `mxe_ip_address` is the IP address of the RM appliance.
-  **Tip** If you have Shared Folder Access enabled, you may be prompted for a password. Enter the username as **mxe-user** and the password you created.
-
- Step 3** RDC to the IP address of the RM or RN appliance you want to apply the patch to.
- Step 4** Go to **Start > Run**, and enter `\mxe_ip_address\media`. The contents of the `\mxe_ip_address\media` folder are displayed.
- Step 5** Copy **H264Patchzip.zip** to the desktop.
- Step 6** Unzip **H264Patch.zip**.
- Step 7** Navigate to the H264Patch folder, and double click on **H264Patch.bat**.
- Step 8** Check the status of the upgrade at `c:\mxepatch.log`
- Upon successful completion, `Patch applied successful` is displayed. This message confirms that the patch is applied successfully.

CSCtx46074.zip

CSCtx46074.zip provides a fix to CSCtx46074. In a preprocessor profile, when the Aspect Ratio Conversion is selected as **Letterbox,Curtains**, when applicable an encoded video with curtains is produced.

Install Instructions

-
- Step 1** Download the software patch, CSCtx46074.zip, from <http://www.cisco.com/cisco/software/type.html?mdfid=282815279&flowid=29121>.
- Step 2** Unzip the software patch (CSCtx46074.zip) to get CSCtx46074.bat.

- Step 3** Copy CSCtx46074.bat to \\mxe-ip-address\temp, where *mxe-ip-address* is the IP address assigned to the Cisco MXE 3500 appliance.
- Step 4** RDC to *mxe_IP_address*, and login as **admin**.
- Step 5** Navigate to c:\temp.
- Step 6** Double click on **CSCtx46074.bat**.

A new **prefilter.exe** is installed. The original prefilter file is saved as **prefilter.ORIGINAL**.

Upon successful completion, Patch successfully applied is displayed. This message confirms that the patch is applied successfully.

Related Documentation

For a list of available Cisco MXE 3500 documentation, see the *Guide to Documentation for Cisco Media Experience Engine 3500* at the following URL:

http://www.cisco.com/en/US/products/ps9892/products_documentation_roadmaps_list.html

Providing Documentation Feedback

To provide feedback on this Cisco MXE 3500 document, or to report an error or omission, you can use the online, Embedded Feedback form that appears on the left side of the screen at the following URL:

http://www.cisco.com/en/US/docs/video/mxe/3500/sw/3_x/release/note/mxe3500rn.html

Alternatively, you can send feedback to mxe-doc@cisco.com.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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