

Media Server

Software Version 12.0.0

Release Notes



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New in this Release

This section lists the enhancements to Media Server version 12.0.0.

Media Server Core

- Media Server includes language identification, speech-to-text, speaker identification, audio matching, and audio categorization. You no longer need to install an IDOL Speech Server to perform these tasks. You can train speech-to-text custom language models, speaker identification, and audio matching by sending actions to Media Server. The configuration parameters for the audio analysis tasks have also been updated so that they are easier to configure and more consistent with other Media Server analysis engines.
- In session configuration files, you can list all of your processing tasks in a single section, `[Session]`, with a single parameter, `Engine`. In previous versions of Media Server you had to list tasks by engine type, using the parameters `IngestEngine`, `AnalysisEngine`, `EncodingEngine`, `OutputEngine`, and so on.

The following configurations are equivalent. Media Server 12 continues to support the older format.

Media Server 11	Media Server 12
<code>[Ingest]</code> <code>IngestRate=1</code> <code>IngestEngine=IngestSource</code> <code>[Analysis]</code> <code>AnalysisEngine0=FaceDetection</code> <code>AnalysisEngine1=FaceRecognition</code> <code>[Transform]</code> <code>TransformEngine0=CropImages</code> <code>[Encoding]</code> <code>EncodingEngine0=EncodeImages</code> <code>[Output]</code> <code>OutputEngine0=OutputXML</code>	<code>[Session]</code> <code>IngestRate=1</code> <code>Engine0=IngestSource</code> <code>Engine1=FaceDetection</code> <code>Engine2=FaceRecognition</code> <code>Engine3=CropImages</code> <code>Engine4=EncodeImages</code> <code>Engine5=OutputXML</code>

- You can choose the directories to use for storing your Lua scripts and XSL templates by setting the new configuration parameters `LuaDirectory` and `XSLDirectory` in the `[Paths]` section of the configuration file.
- The `GetExampleRecord` action can now list example records from all analysis engines for a specific track.

- The server supports the `schedule` action, which schedules actions to run automatically on a defined schedule.
- Several new modes have been added for the JSON response format. The `ResponseFormat` general ACI action parameter has the following new options:
 - `json/0`. The older JSON format, which returns single-element lists as objects rather than arrays.
 - `json/1`. A new JSON format, which returns single-element lists as arrays, for consistency with multiple-element lists.
 - `simplejson`. A new JSON format, similar to `json/1`, but it does not use \$ nodes to represent XML nodes unless the equivalent XML node contains attributes. This response format also does not use `autn:` prefixes in node names.

The existing `ResponseFormat` option, `json`, uses your default JSON format, which you configure by setting the `JSONFormat` parameter in the `[Server]` section of the configuration file. The `JSONFormat` configuration parameter accepts the three values listed above, as well as `json`, which uses the latest JSON format version (currently `json/1`).

- The OpenSSL library has been updated to version 1.0.2n.

Ingest

- Media Server extracts subtitle (closed caption) images from ingested video. You can run OCR on the subtitles and extract the text.
- Media Server has a new ingest engine (`Type=VMS`) to ingest video from a Micro Focus Video Management Server.

Analysis

- Face recognition has a new configuration parameter, `OutputIdentities`, so that you can choose the types of identities to include in the output. For example, if you are attempting to recognize intruders in a building and your database contains people who are expected to be present, you could set `OutputIdentities=Unknown` to output only unrecognized faces.
- Images that contain multiple faces can be used to train face recognition. However, an image that contains multiple faces is accepted only if one of the faces covers more than double the image area of the others. The largest face is used to train Media Server and the others are ignored.
- Optical character recognition has a new mode (`Mode=Auto`) which automatically selects the algorithm to use to process still images.
- The following speech-to-text language packs have been improved:

Broadband	
English - British	ENUK
English - Singaporean	ENSG
English - US	ENUS

Italian	ITIT
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Telephony	
Arabic - Modern Standard Arabic	ARMSA-tel
Chinese - Mandarin	ZHCN-tel
Czech	CSCZ-tel
Danish	DADK-tel
English - British	ENUK-tel
Italian	ITIT-tel
Portuguese - Brazilian	PTBR-tel
Russian	RURU-tel

- Clothing analysis now analyzes multiple video frames to produce a single result, which can increase accuracy. Providing you have sufficient computational resources, you can benefit from this improvement by setting the input for clothing analysis to the `DataWithSource` track that is generated by the face detection or object detection task that you have configured to identify people. The `Result` track generated by clothing analysis is more consistent with other analysis engines because it now contains a single record for each person. The clothing analysis engine now generates `Data` and `DataWithSource` tracks to provide the results for individual frames.
- Color clustering now analyzes multiple video frames to produce a single result, which can increase accuracy. When the input for color clustering is provided by an ingest engine, the color clustering task starts a new result when there is a significant change in the color clustering results. When the input is provided by an analysis engine that supports tracking, the color clustering task starts a new result for each event. The color clustering engine now generates `Data` and `DataWithSource` tracks to provide the results for individual frames.
- Image classification now analyzes multiple video frames to produce a single result, which can increase accuracy. When the input for image classification is provided by an ingest engine, the image classification task starts a new result when there is a significant change in the classification result. When the input is provided by an analysis engine that supports tracking, the image classification task starts a new result for each event. The image classification engine now generates `Data` and `DataWithSource` tracks to provide the results for individual frames.
- Image classification has a new configuration parameter `VariableState`, which specifies whether the classifier contains multiple classes that represent different states of the same type of object. For example, if you have an image classifier that recognizes dogs with classes "sitting dog", "standing dog", and "running dog", set this parameter to `TRUE`. This instructs Media Server that an object in a video can change states between frames.

- The following analysis engines now support segmented results:
 - Clothing analysis
 - Color clustering
 - Image classification
- Scene analysis can be configured to track objects and generate alarms only when the video from the camera matches a scene image. This is useful when you want to analyze video from a pan-tilt-zoom (PTZ) camera, but expect operators to move the camera, because it prevents false alarms being generated when the camera is moved away from the trained scene. You can use the scene analysis training utility to capture the scene image.

Encoding

- Media Server has a new encoding engine (Type=EvidentialRollingBuffer) for evidential recording.

Transformation

- Media Server has a new transform engine (Type=SetRectangle) which runs a Lua script to dynamically add a region to records. You might use this engine to add a region to be analyzed by a subsequent analysis task.

Resolved Issues

This section lists the resolved issues in Media Server version 12.0.0.

- Media Server could terminate unexpectedly if two PDF files were processed simultaneously.
- Processing document files such as PDF or RTF documents could cause unrelated Media Server actions to fail.
- In the scene analysis training utility, when a category was optimized but the user clicked cancel, the "Other Objects %" alarm filter did not revert to its original value.
- The `ShowPermissions` action did not show permissions for `SSLIdentities` configured in the `[AuthorizationRoles]`.
- If an ACI Server was configured to request client SSL certificates, running multiple requests from a client could sometimes fail with **session id context uninitialized** errors. For example, this could occur when loading IDOL Admin.

Supported Operating System Platforms

The following operating system platforms are supported by Media Server 12.0.0.

- Windows x86 64
- Linux x86 64

The documented platforms are the recommended and most fully tested platforms for Media Server. The following sections provide more information about the most fully tested versions of these platforms.

Windows

- Windows Server 2016
- Windows Server 2012
- Windows Server 2008
- Windows 7

Linux

The minimum recommended versions of particular distributions are:

- CentOS 6
- Ubuntu 14.04

Supported Platforms with GPU support

The following operating system platforms are supported by Media Server 12.0.0 with GPU support.

- Windows x86 64
- Linux x86 64

The most fully tested versions of these platforms are:

Windows

- Windows Server 2012 R2

Linux

- Ubuntu 16.04
- Ubuntu 14.04

Notes

This section contains information that is important if you are upgrading from an earlier version of Media Server.

- The standard Windows and Linux platforms now support GPU acceleration. If you want to enable GPU acceleration, you can now install Media Server with the standard IDOL installer. The `UseGPU` configuration parameter has been replaced with a new parameter named `CUDAVersion`.
- As a result of the improvements in audio analysis in Media Server 12.0.0, you must reconfigure your language identification, speech-to-text, speaker identification, audio matching, and audio categorization tasks. For information about configuring these tasks, refer to the *Media Server Administration Guide* and *Media Server Reference*.
- The following engines have been renamed:

Media Server 11.x	Media Server 12.x	Notes
LibAv	Video	
ObjectClass	ImageClassification	Image classification now returns results of type <code>ImageClassificationResult</code> .
ObjectDetection	ObjectClassRecognition	Object class recognition now returns results of type <code>ObjectClassRecognitionResult</code> . The relevant training actions have also been renamed. The <code>detector</code> configuration parameter has been renamed to <code>recognizer</code> . The <code>ListDatabases</code> action now returns entries named <code>objectclassrecognizer</code> rather than <code>detector</code> .
Object	ObjectRecognition	Object recognition now returns results of type <code>ObjectRecognitionResult</code> .

- The rolling buffer encoder no longer supports evidential mode. You can use the new evidential rolling buffer encoder instead.
- Media Server now generates records only in tracks that are used. For example, if you run face detection but do not use the face detection data track as the input for another task, Media Server does not generate records in that track.

- The default values for the following configuration parameters have been updated:

Feature	Configuration parameter	Default value Media Server 11.6	Default value Media Server 12.0
Media Server Core	StaticDataDirectory	./	./staticdata/
Face recognition	MaxRecognitionResults	5	1

Database Upgrade

IMPORTANT:

If you are upgrading from Media Server 11.3 or earlier, you must update the training database schema before installing Media Server 12.0.0.

- If your training data is stored in the internal database, upgrade to Media Server 11.4, 11.5, or 11.6 and start Media Server so that it can update the database.
- If your training data is stored in a MySQL or PostgreSQL database, run the appropriate database upgrade script. The database upgrade scripts for Media Server 11.3 and earlier are included with Media Server 11.4, 11.5, and 11.6.

For more information about upgrading the database schema, refer to the *Media Server Administration Guide*.

Deprecated Features

Category	Deprecated Feature	Deprecated Since
Analysis engines	Event tracks. The analysis engines that produce event tracks now have <i>Start</i> and <i>End</i> tracks. The <i>Start</i> and <i>End</i> tracks are the same as the <i>Data</i> track, but they only contain the first or last record for each event. This means that the records describing the start and end of events now have the same schema as records that provide the analysis results.	12.0.0
Scene Analysis	The configuration parameters <i>IsasTrainingDirectory</i> and <i>IsasAlarmDirectory</i> . Micro Focus recommends that you use the parameters <i>SceneAnalysisTrainingDirectory</i> and <i>SceneAnalysisAlarmDirectory</i> instead.	12.0.0
Server / Service	The <i>AdminClients</i> , <i>QueryClients</i> , <i>ServiceControlClients</i> , and <i>ServiceStatusClients</i> configuration parameters. Micro Focus recommends that you use authorization roles instead.	11.5.0

Rolling buffer	<p>The action parameter name, available on the actions <code>AddStream</code>, <code>EditStream</code>, <code>GetStreamInfo</code>, <code>PreAllocateStorage</code>, and <code>RemoveStream</code>. Micro Focus recommends that you use the parameter <code>stream</code>, instead.</p> <p>The action parameters <code>OldName</code> and <code>NewName</code>, on the action <code>RenameStream</code>. Micro Focus recommends that you use the parameters <code>Stream</code> and <code>NewStream</code> instead.</p>	11.4.0
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Removed Features

The following features have been removed:

- Time durations with default units. In previous versions of Media Server, you could specify some time durations without units and the value would default to either seconds or milliseconds. In Media Server 12.0.0 you must specify the units.
- The `IngestTime` configuration parameter, from the `LibAv` ingest engine. Micro Focus recommends that you use the new configuration parameter `IngestDateTime` instead. The new parameter accepts values in a greater number of formats.
- The `Wittwin` ingest engine.
- The `Mode`, `ModeValue`, and `UseFrameDuplication` configuration parameters, from speech-to-text. You can replace all of these parameters with the new parameter `SpeedBias`.
- The `Bayesian` and `Maxvote` classifier types, for image classification. Convolutional Neural Network (CNN) classifiers provide better accuracy.

NOTE:

When you upgrade to Media Server 12.0, any Bayesian or Maxvote classifiers that exist in your training database are marked as `STALE`. You cannot use these classifiers to run image classification unless you retrain them as CNN classifiers. To retrain a classifier, run the `BuildClassifier` action. Micro Focus recommends that you review the training requirements for CNN classifiers because you might be able to achieve better accuracy by adding additional training images.

- The `ANPRFormatsDirectory` and `ANPRWeightsDirectory` configuration parameters. You can set the path for all static data folders by setting the configuration parameter `[Paths] StaticDataDirectory`.
- The configuration parameters `BlackAndWhiteCamera` and `RepeatDelay`, from number plate recognition. Media Server 11.5.0 and later automatically detect whether the source video is black-and-white. Media Server 11.6.0 and later produce a single result record for each appearance of a vehicle.
- The `resultstatus`, `integrationstatus`, and `finaldata` fields in number plate records.

- The configuration parameters `OutputAllIntResults` and `PlateSizeUnit`, from number plate recognition. You can use the new parameters `OutputAlternativeResults` and `CharHeightUnit`, respectively.
- The OCR configuration parameter `ImageBinarizeMethod`.
- The language ID configuration parameter `CumulativeMode`. Use the parameter `Mode` instead.
- Speaker identification with GMM models.
- The scene analysis configuration parameters `LearntSceneActivityTreshold`, `LearntSceneCompareProportion`, `LearntSceneDirectory`, `LearntSceneStem`, and `PtzFolder`.
- The scene analysis output track `TrainingUtilAlarms`.

Documentation

The following documentation was updated for this release.

- *Media Server Administration Guide*
- *Media Server Reference*
- *Media Server Scene Analysis Training Technical Note*