



Media Server

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Release Notes

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New in this Release

The following enhancements were added in Media Server version 11.6.0.

Media Server Core

- NVIDIA Pascal series cards (with CUDA compute capability 6.0 and 6.1) are now supported by GPU Media Server.
- The server generates events to alert you when an asynchronous action queue becomes full, becomes empty, and when the queue size passes certain thresholds. You can handle these events with any of the existing event handlers.
- You can now configure your authorization role `SSLIdentities` to identify clients by using an email address in the certificate `subjectAltName`. You can use an optional tag for each SSL identity to specify whether it is a **dns** or **email** type identity. If there is no tag, the server treats it as **dns** type. For example:

```
SSLIdentities=email:user@example.com,dns:admin.example.com,webapp.example.com
```

- When using GSS security, you can now configure the service to allow clients to authenticate to any service principal in the service's keytab, rather than requiring a single principal. You use this option by setting the `GSSServiceName` configuration parameter to an asterisk (*).

Ingest

- Media Server can ingest JPEG 2000 image files.
- Media Server can ingest WebP image files.

Analysis

- Media Server provides a way to obtain partial analysis results before an event finishes. Analysis engines can produce new output tracks, `SegmentedResult` and `SegmentedResultWithSource`. These are similar to the existing `Result` and `ResultWithSource` tracks, except that the maximum duration of a record is limited to the value of the new parameter `SegmentDuration`. When a record reaches the maximum duration, Media Server outputs the record and begins a new one with the same ID. This means that for every record in the `Result` track that exceeds the maximum duration, there will be two or more records in the `SegmentedResult` track.

Segmented results are useful when you need to obtain information about an event before it finishes. For example, if a stolen vehicle remains in view of a camera for several minutes, you do not want to wait until the vehicle has left the scene before raising an alert. You could use the `Data` track to obtain output as soon as each video frame has been analyzed, but the `SegmentedResult` track provides a balance between accuracy and latency, because Media Server can track events and analyze multiple frames before providing a result.

Segmented results are supported by the following analysis operations:

- Barcode recognition
- Face detection
- Face recognition

- Face demographics
- Face state (expression)
- Number plate recognition
- Object recognition
- Vehicle make and model recognition
- With some analysis engines, records in the `Data` track become more accurate as an event progresses, because Media Server takes into account the results obtained from analyzing previous frames. The record timestamps still relate to a single video frame. This change applies to face detection, object recognition, number plate recognition, and vehicle make/model recognition. As before, `Result` records provide optimum accuracy because Media Server can combine the data obtained from analyzing individual frames, from the beginning of the event to the end.
- A new pre-trained object detector (`ObjectDetector_CommonObjects.dat`) is available for download. This detects common objects and includes the following classes: person, bird, cat, cow, dog, horse, sheep, aeroplane, bicycle, boat, bus, car, motorbike, train, bottle, chair, dining table, potted plant, sofa, tv/monitor.
- Media Server includes a new analysis engine (`Type=AudioCategorize`) for segmenting and classifying audio into categories such as "speech", "music", "noise", and "silence". You can use audio categorization to inspect an audio file and decide whether to perform further processing. For example, when audio categorization reports that a file contains mostly speech, you might decide to run language identification and speech-to-text.
- Speech-to-text is easier to configure, because you can now set a single parameter, `SpeedBias`, to balance accuracy and speed.
- Face recognition, demographics, and expression analysis are more accurate, because they analyze multiple video frames to produce a single result. Providing you have sufficient computational resources, you can benefit from this improvement by setting the input for your face recognition, demographics, or expression task to the `DataWithSource` track that is generated by face detection. The `Result` track generated by these engines is more consistent with other analysis engines because it now contains a single record for each person, rather than a record for each frame received from face detection. The engines now generate `Data` and `DataWithSource` tracks to provide the results for individual frames.
- Object detection is more accurate because it analyzes multiple video frames to produce a single result. The `Data` and `DataWithSource` tracks have been added to provide the results for individual frames and the `Result` track now contains a single record for each detected object. This change also improves the speed of object detection when a small sample interval is used. No configuration changes are required to benefit from these improvements.
- Image hashes can be stored in the Media Server database, so that you can use image hash analysis to detect duplicate images without needing to query an IDOL Content component.
- Number plate recognition generates records that are more consistent with other analysis engines. Records are generated only when a number plate is read successfully, and records that relate to the same vehicle all have the same UUID.
- The number plate formats for the United Arab Emirates - Umm al-Quwain (AE-UQ), and United Arab Emirates - Dubai (AE-DU) have been updated so that Media Server recognizes additional plate formats.
- Number plate recognition produces fewer false positives when using `Location=NZ-PP` or `Location=NOF`.

- Number plate recognition produces fewer false positives when processing video files or streams with duplicate frames.
- Scene analysis has new alarm filters. You can prevent an alarm occurring if an object crosses a tripwire in the wrong direction, accelerates or decelerates between tripwires, or spends too much or too little time between tripwires. You can allow or reject alarms based on the proportion of the region of interest that is considered active. You can prevent an alarm occurring when an object has been continually present in a region of interest for longer than a specified time duration.

User Interfaces

- The graphical user interface, available through `action=gui`, has been improved. You can now move identities between databases, and move images between identities.
- The scene analysis training utility reads user preferences for some options from a configuration file, `TUPreferences.cfg`.
- When optimizing a category in the scene analysis training utility, you can enable or disable characteristics such as size and orientation. The training utility shows the effect on the number of false and missed alarms. This feature can help you decide whether a different combination of characteristics is more effective in filtering alarms.
- The scene analysis training utility saves additional information with each classified alarm, so that an object's time in a region of interest can be calculated more accurately if the region of interest is moved before the category is optimized.
- The scene analysis training utility always displays the position of tripwires for the current category.

Resolved Issues

The following issues were resolved in Media Server version 11.6.2.

- Javascript could be injected into the `GetRequestLog` response by sending actions to the server.

The following issues were resolved in Media Server version 11.6.0

- The file `libopenblas_AMD_Bulldozer.dll` was not released with Media Server 11.5.0 but is now available. To run tasks that use convolutional neural networks on a machine that has a processor from the AMD Bulldozer series, download the latest version of `libopenblas_AMD_Bulldozer.dll`, and rename it such that it replaces the file `libopenblas.dll` that is included in the Media Server installation.
- `KeyView` could terminate Media Server unexpectedly.
- Media Server could incorrectly replace special characters in the destination URL for an HTTP POST output task.
- The MPEG encoder did not segment encoded video files when the `ImageInput` parameter specified a track other than the default.
- After being restarted, Media Server did not resume `process` actions that were started with `persist=true`.
- The value of the configuration parameter `[Modules]Enable` was incorrectly expected to be lower-case.
- Number plate recognition could incorrectly reject some number plates for not matching a valid format, but only in locations where some number plate formats include sub-reads, logos, or color patches.
- With the image encoder, the values produced by the macro `%segment.sequence%` incorrectly started at 0, instead of 1.
- The `LogSysLog` logging configuration option did not output event logs.
- License related messages in the event log would appear from a different source to other messages.
- Scene analysis did not output records for an event when the source media was a file and the event occurred immediately before the end of the file.
- Scene analysis could identify too many objects in a scene, after using the default background method for some time.
- The scene analysis training utility could terminate unexpectedly after a category was added or removed from a configuration, or when alarms were reviewed.
- The scene analysis training utility would optimize alarm filter thresholds when insufficient alarms had been classified as true alarms.
- The scene analysis training utility did not save changes to alarm classifications when existing classifications were modified.
- The scene analysis training utility could set the minimum and maximum object size incorrectly.
- In the scene analysis training utility, object tracking could appear to turn on and off when live video was viewed.

- In the scene analysis training utility, reloading the open configuration failed to discard unsaved changes.
- The scene analysis training utility failed to send some settings (background type, background update, and active area threshold or deviation threshold) to Media Server when sending a training configuration.
- Alarms generated manually, through the scene analysis training utility, could have incorrect values for some alarm filter values.

Supported Operating System Platforms

The following operating system platforms are supported by Media Server 11.6.2.

- 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 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 11.6.2 with GPU support.

- Windows x86 64. GPU Media Server requires that NVIDIA driver 375.26 (or later) is installed on the machine, so any Windows operating system on which you can successfully install this driver is supported. (GeForce GTX graphics cards are not supported on Windows).
- 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.

GPU Requirements

- To use a GPU to accelerate Media Server processing tasks, you must place the GPU in TCC mode. (Windows only. This does not apply to Linux because TCC mode is used by default for headless Linux systems).
- GeForce GTX graphics cards are supported only with headless Linux operating systems.

Licensing Changes

- The licensing model for face recognition with visual channels has changed. Face detection and face recognition require a single visual channel to recognize up to 250,000 faces, but each additional 250,000 faces requires an additional visual channel. For example, to run face detection and face recognition with a database of 700,000 faces now requires three visual channels. You can no longer set the configuration parameter `MaxFaces` to `Unlimited`, and must now specify a number.

Deprecated Features

Category	Deprecated Feature	Deprecated Since
Speech-to-text	The <code>Mode</code> , <code>ModeValue</code> , and <code>UseFrameDuplication</code> configuration parameters. You can replace all of these parameters with the new parameter <code>SpeedBias</code> .	11.6.0
Number plate recognition	The <code>RepeatDelay</code> configuration parameter. Number plate recognition now produces a single result record for each appearance of a vehicle. The <code>resultstatus</code> , <code>integrationstatus</code> , and <code>finaldata</code> fields in number plate records. Number plate recognition now generates records only when a number plate is read successfully. Records that relate to the same vehicle all have the same UUID.	11.6.0
Server / Service	The <code>AdminClients</code> , <code>QueryClients</code> , <code>ServiceControlClients</code> , and <code>ServiceStatusClients</code> configuration parameters. Micro Focus recommends that you use authorization roles instead.	11.5.0
Number plate recognition	The <code>BlackAndWhiteCamera</code> configuration parameter. Media Server 11.5.0 automatically detects whether the source video is black-and-white, so you no longer	11.5.0

	need to set this parameter.	
Speech analysis	The <code>ErrorMessage</code> configuration parameter, for the audio matching, language identification, speaker identification, and speech-to-text analysis tasks. You can use the parameter <code>MaxConsecutiveTries</code> to fail the session when the Speech Server is unavailable.	11.5.0
Image classification	The <code>Bayesian</code> and <code>Maxvote</code> classifier types. Micro Focus recommends that you use Convolutional Neural Network (CNN) classifiers instead.	11.4.0
Ingest - LibAV	The <code>IngestTime</code> configuration parameter. Micro Focus recommends that you use the new configuration parameter <code>IngestDateTime</code> instead. The new parameter accepts values in a greater number of formats.	11.4.0
Number plate recognition	The <code>ANPRFormatsDirectory</code> and <code>ANPRWeightsDirectory</code> configuration parameters. You can set the path for all static data folders by setting the configuration parameter <code>[Paths] StaticDataDirectory</code> .	11.4.0
Number plate recognition	The <code>OutputAllIntResults</code> and <code>PlateSizeUnit</code> configuration parameters. Micro Focus recommends using the new parameters <code>OutputAlternativeResults</code> and <code>CharHeightUnit</code> , respectively.	11.4.0
OCR	The <code>ImageBinarizeMethod</code> configuration parameter.	11.4.0
Speaker identification	GMM models. Micro Focus recommends that you use Speaker Identification with <code>iVector</code> models instead.	11.4.0
Language identification	The configuration parameter <code>CumulativeMode</code> . Micro Focus recommends that you use the parameter <code>Mode</code> instead.	11.4.0
Rolling buffer	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 new parameter <code>stream</code> , instead.	11.4.0
Rolling buffer	The action parameters <code>OldName</code> and <code>NewName</code> , on the action <code>RenameStream</code> . Micro Focus recommends that you use the new parameters <code>Stream</code> and <code>NewStream</code> instead.	11.4.0
Face detection	The <code>DetectEyes</code> configuration parameter.	11.3.0

Removed features

The following features have been removed:

- The `Integration` and `MaxRead` parameters, from number plate recognition. Integration is still performed but no longer needs to be configured. If you want to obtain a result before a vehicle leaves the scene you can use the new `SegmentedResult` output track.

Documentation

The following documentation was updated for this release.

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