



**Hewlett Packard**  
Enterprise

# Media Server

Software Version: 11.5.0

## Release Notes

Document Release Date: October 2017

Software Release Date: October 2017

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# Contents

New in this Release ..... 5

Resolved Issues ..... 8

Supported Operating System Platforms ..... 9

Notes ..... 10

Documentation ..... 13

# New in this Release

This section lists the enhancements to Media Server version 11.5.0.

## Media Server Core

- GPU acceleration is now available for GeForce GTX graphics cards with CUDA compute capability 3.0 to 5.2.
- Media Server supports a new method of chaining (sending records to another Media Server for further processing). With the new method, called *feedback chaining*, the downstream Media Server returns the results of analysis to the upstream Media Server and output tasks occur on the upstream server. The downstream Media Server performs analysis on records independently, which has implications for licensing and the number of requests that can be handled simultaneously. For more information about the differences between one-way chaining and feedback chaining, refer to the *Media Server Administration Guide*. To support this new feature, Media Server has a new analysis engine (Type=RemoteAnalysis).
- Media Server supports OEM licensing.
- Media Server has been validated in cloud environments such as Amazon Web Services, Microsoft Azure, and Google Cloud.
- The action ValidateProcessConfig has been added. This validates a task configuration without starting processing.
- Media Server has a new action, GetExampleRecord, which returns an example record for a specified output track of a specified analysis engine.
- Media Server provides a new Lua function, log(message), so that you can write log messages from Lua scripts. The messages are written to a new log type (LogTypeCSVs=Lua).
- The configuration parameter CompressionQuality, for the image encoder and image format transformation engines, is now supported for images in PDF format. You can specify a quality level from 0 to 100, or "lossless".
- In the Lua representation of a record you can access data by type. For example, record.FaceRecognitionResult.identity.identifier can be simplified to record.IdentityData.identifier, in the same way as for macros.
- All ACI server ports now support the Expect: 100-continue HTTP header. Previously, third-party client applications that used this header (for example, using the cURL utility with the -F option to POST form data) could experience increased latency when communicating with the ACI server.
- You can now configure GSS authentication on the ACI and service ports without using ACI encryption. In this mode, all connections to the ports must be authenticated using GSSAPI and the Negotiate HTTP authentication mechanism.

To use GSS authentication, you must set the GSSServiceName parameter in the [Server] section to the full service name, domain, and Kerberos realm for the service. You can then set the RequireGSSAuth parameter in the [Server] section to enable GSS authentication on the ACI port, and set RequireGSSAuth in the [Service] section to enable GSS authentication on the service port.

**NOTE:**

You cannot configure `RequireGSSAuth` with the `[ACIEncryption]` configuration options. If you attempt to configure both, the server does not start.

This method provides an authentication requirement only. HPE recommends that you use it in conjunction with TLS/SSL to encrypt the authentication data.

## Ingest

- The image ingest engine extracts significantly more metadata from TIFF files.
- Media Server (on Windows platforms only) can ingest video from Genetec Security Center. This feature is provided by a new ingest engine (`Type=GenetecIngest`).
- Media Server supports a new action, `DescribeMedia`, which returns information about a media file or stream, estimates the ability of Media Server to ingest it, and recommends which ingest engine to use.
- Media Server can ingest Mobotix MxPEG video (but not the audio) from a file or stream. This feature is provided by a new ingest engine (`Type=MxPEG`).
- Media Server includes a new ingest engine (`Type=Wittwin`) to ingest video from Wittwin and read Wittwin timestamps.

## Analysis

- Face recognition has been improved, for example Media Server now has greater tolerance for uneven illumination and rotated faces. As a result of these improvements, you must retrain Media Server to recognize faces by running the action `BuildAllFaces`.
- The accuracy of optical character recognition (OCR) has been improved for poor-quality images of scanned documents.
- OCR can process multiple pages of a multi-page image or document at the same time. Providing that your server has sufficient CPU cores, this feature can decrease the amount of time required to perform OCR. To specify the number of pages to process concurrently, use the configuration parameter `NumParallel`.
- Object recognition supports a new algorithm for detecting 2-D objects (`Geometry=AFF2`). HPE recommends that you use this mode when the objects are expected to be small compared to the distance from the camera (so the objects take up a small part of the image, or the camera has a long focal length).
- Number plate recognition accepts a new parameter, `LocationWithPriorities`. You can set this instead of `Location`, in cases where you want to specify priorities for each location. For example, `LocationWithPriorities=fr:1.0,de:0.1,be:0.05` recognizes French, German, and Belgian number plates, but instructs Media Server that German number plates are ten times less likely to be seen than French plates, and Belgian number plates are twenty times less likely to be seen than French plates.
- Image comparison supports the configuration parameter `RestrictToInputRegion`, so that you can analyze a region of the input image or video frame that was identified by another analysis task.
- Scene analysis can generate alarms based on the path an object has taken through the scene. You can define one or more tripwires that an object must cross in order to cause an alarm.
- Number plate recognition can read personalized number plates for New Zealand (`Location=NZ-PP`).

## Encoding

- Media Server can encode and stream video in MJPEG format. This feature is provided by a new encoding engine (Type=MJPEG).
- The image encoder can create multi-page TIFF and PDF files by appending images to an output file instead of overwriting it. To do this, set the new configuration parameter Append to TRUE.

## Event Stream Processing

- ESP tasks can accept the same track for two inputs. In previous versions of Media Server, this resulted in an error. Using the same track for two inputs can be useful in some cases, such as with the AndNot engine, to filter the records in a track based on properties of other records in the same track. For example, you can exclude records if there is a record with greater confidence within a specified time interval.

## Output

- Media Server includes a new output engine (Type=GenetecOutput), to send events to a Genetec Security Center.
- Media Server includes a new output engine (Type=Lua), which produces a Lua representation of each record and writes the representations to disk. This engine is intended to help you write and troubleshoot Lua scripts.

## User Interfaces

- The scene analysis training utility can display the position of regions of interest when you review alarms or existing alarm classifications.
- When reviewing alarms in the scene analysis training utility, you can choose to sort the alarms by object size or by the time the alarms occurred.
- The scene analysis training utility no longer requires a category to have false alarms in its region of interest for the category to be optimized.
- Previous versions of scene analysis could filter alarms by time of day but you can now choose to apply the time filters only on weekdays or weekends.
- When reviewing alarms in the scene analysis training utility, you can choose to always show the alarm details.
- In the scene analysis training utility, you can now review alarms that you have classified and modify the classifications.
- In the scene analysis training utility, you can change the shape of a region of interest without having to draw a new region.
- When you optimize a category in the scene analysis training utility, you can choose whether to use the Min Time in Scene and Min Time in ROI alarm filters for reducing the number of false and missed alarms (in some cases you might have set these filters and might not want to change the values).

## Resolved Issues

This section lists the resolved issues in Media Server version 11.5.0.

- The scene analysis training utility did not permit some valid values to be entered for the maximum object size in the category details.
- An issue with the OpenBLAS library could cause Media Server to terminate unexpectedly when using convolutional neural networks.

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` from the [Big Data Download Center](#), and rename it such that it replaces the file `libopenblas.dll` that is included in the Media Server installation.

The following issues were resolved in Media Server version 11.4.1:

- Media Server did not provide any warning when scene analysis was configured to read traffic lights but the positions of the lights were not defined. The task would start but no alarms would ever be generated.
- In scene analysis, user-generated alarms that were classified as false alarms were lost and could not be used to optimize the configuration.
- The scene analysis training utility did not correctly track modifications to a configuration. In some cases there was no prompt to save the configuration after changes had been made.
- When an authorization role defined `Actions`, `ServiceActions`, or `IndexActions`, and the authorization role `Clients` parameter contained host names, calling the `ShowPermissions` action could result in an interruption of service.



# Supported Operating System Platforms

The following operating system platforms are supported by Media Server 11.5.0.

- 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 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 11.5.0 with GPU support.

- Windows x86 64. The only requirement for GPU Media Server is that NVIDIA driver 352.07 (or later) is installed on the machine, so any Windows operating system on which you can successfully install this driver is supported.
- 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.

## Licensing Changes

- GPU acceleration is now permitted with surveillance licenses.
- The licensing requirements for chaining (sending records to another Media Server for further processing) have changed. The downstream server now requires one visual channel for each session that is started by an upstream Media Server, regardless of the analysis engines used.
- The licensing model for surveillance channels has changed. Face detection and face recognition require a single surveillance channel to recognize up to 250 faces, but each additional 250 faces requires an additional surveillance channel. For example, to run face detection and face recognition with a database of 600 faces now requires three surveillance channels. A new configuration parameter, `MaxFaces`, has been added to the face recognition engine. If you want to recognize more than 250 faces using a surveillance license you must set this parameter to the number of faces in your face database. Visual licenses are unaffected and the number of faces that you can recognize with a visual channel is unlimited.

## API and Configuration Changes

- Ingestion, analysis, encoding, transformation, event stream processing, and output tasks can no longer be configured in the Media Server configuration file (`mediaserver.cfg`). The task configuration must be passed to the `process` action when you begin processing. This means that when you send a `process` action to Media Server you must set one of the action parameters `Config`, `ConfigName`, or `ConfigPath`.
- As a result of improvements to face recognition, you must retrain Media Server to recognize faces by running the action `BuildAllFaces`.
- Tracks produced by ingest engines now follow similar naming conventions to the tracks produced by other engines. The first image track is named `TaskName.Image_1`, where `TaskName` is the name of the ingest task. The first audio track is named `TaskName.Audio_Lang_1`, or `TaskName.Audio__1` if the language is not available. You can use the aliases `Default_Image` or `Image_1` to refer to the first image track, and the alias `Default_Audio` to refer to the first audio track.

### IMPORTANT:

You must update any configuration that uses track names such as `Image_2`, `Audio__2`, `Image_3`, `Audio__3`, and so on.

- The output of face recognition, objection recognition, and vehicle model identification no longer includes the `imageLabel` element, which identified the training image that best matched the recognized face, object, or vehicle.
- Media Server does not output results if there is an error communicating with the Speech Server for audio matching, language identification, speech-to-text, or speaker identification. Previous versions of Media Server created records that contained an error message, but you should use the parameter `MaxConsecutiveTries` to fail the session when the Speech Server is unavailable.

- The LibAv ingest engine no longer accepts streams from Wittwin. HPE recommends that you use the new Wittwin ingest engine instead.

### User Interface Changes

- The live video display in the scene analysis training utility shows regions of interest for the current category, rather than for all categories.

### Deprecated Features

Category	Deprecated Feature	Deprecated Since
Server / Service	The AdminClients, QueryClients, ServiceControlClients, and ServiceStatusClients configuration parameters. HPE recommends that you use authorization roles instead.	11.5.0
Number plate recognition	The BlackAndWhiteCamera configuration parameter. Media Server 11.5.0 automatically detects whether the source video is black-and-white, so you no longer need to set this parameter.	11.5.0
Speech analysis	The ErrorMessage configuration parameter, for the audio matching, language identification, speaker identification, and speech-to-text analysis tasks. You can use the parameter MaxConsecutiveTries to fail the session when the Speech Server is unavailable.	11.5.0
Image classification	The Bayesian and Maxvote classifier types. HPE recommends that you use Convolutional Neural Network (CNN) classifiers instead.	11.4.0
Ingest - LibAV	The IngestTime configuration parameter. HPE recommends that you use the new configuration parameter IngestDateTime instead. The new parameter accepts values in a greater number of formats.	11.4.0
Number plate recognition	The ANPRFormatsDirectory and ANPRWeightsDirectory configuration parameters. You can set the path for all static data folders by setting the configuration parameter [Paths] StaticDataDirectory.	11.4.0
Number plate recognition	The OutputAllIntResults and PlateSizeUnit configuration parameters. HPE recommends using the new parameters OutputAlternativeResults and CharHeightUnit, respectively.	11.4.0
OCR	The ImageBinarizeMethod configuration parameter.	11.4.0

Speaker identification	GMM models. HPE recommends that you use Speaker Identification with iVector models instead.	11.4.0
Language identification	The configuration parameter <code>CumulativeMode</code> . HPE recommends that you use the parameter <code>Mode</code> instead.	11.4.0
Rolling buffer	The action parameter <code>name</code> , available on the actions <code>AddStream</code> , <code>EditStream</code> , <code>GetStreamInfo</code> , <code>PreAllocateStorage</code> , and <code>RemoveStream</code> . HPE 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> . HPE 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 deprecated features have been removed:

- The configuration parameter `FrameRateMax`, from the image encoder.

# Documentation

The following documentation was updated for this release.

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