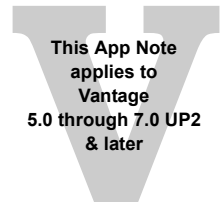




Installing and Using NexGuard with Vantage



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Note: This guide is written for video professionals who are familiar with using Vantage. To implement applications in Vantage, you should know how to create workflows and submit jobs. If you aren't familiar with Vantage, we suggest that you review the *Vantage User's Guide* and *Vantage Domain Management Guide* as needed.



Synopsis

NexGuard is used in post-production to provide audio and video watermarking that makes content copies traceable and secure throughout the dubbing, review, preview, and distribution processes. The embedded forensic marking deters piracy by ensuring traceability of individual copies, even during tape or DVD duplication, transfer, and transcoding.

The optional Vantage NexGuard connector allows you to embed a NexGuard watermark during transcoding in Vantage. This option requires that you separately purchase and install the NexGuard software from Kudelski Group in addition to the Vantage software and NexGuard connector from Telestream.

Vantage and NexGuard

NexGuard is an optional, licensed feature in Vantage. This app note describes how to integrate NexGuard into Vantage by using the NexGuard filter in your transcoding workflows. We've also provided an example workflow depicting a typical usage pattern with NexGuard, along with pointers for configuring a NexGuard workflow using the inspector.

Vantage NexGuard Inputs

The NexGuard filter in Vantage actions accepts one media file as an input and the watermark payload used to create the watermark.

Vantage NexGuard Outputs

The NexGuard filter in Vantage workflows produces output media files containing NexGuard forensic watermarking. Transcoding and other processing in Vantage does not alter the watermark once it is embedded.

NexGuard & Vantage License Requirements

You can integrate NexGuard with Vantage only using the following versions:

- Vantage 4.0, 5.0, 6.0, or later with NexGuard connector option for each node running NexGuard software.
- NexGuard Pre-Release version or later. The software and license must be purchased and licensed from Kudelski Group or an authorized reseller. For Vantage transcoding actions, NexGuard must be installed on each server (tied to the machine's MAC address) where NexGuard will be used and authorizes a number of seats or simultaneous sessions. For the Notify action (get payload and report) NexGuard only needs to be reachable from the Message services that will run the actions. Contact your NexGuard representative for details.

Note: Vantage can only run as many simultaneous transcoding jobs using NexGuard as the number of seats available. If you expect to run many jobs at once, be sure to buy as many seats as you will need to accomplish that purpose.

Integrating NexGuard with Vantage

The following text and figures describe typical Vantage-NexGuard installation and integration procedures. For details of NexGuard installation, refer to their documentation.

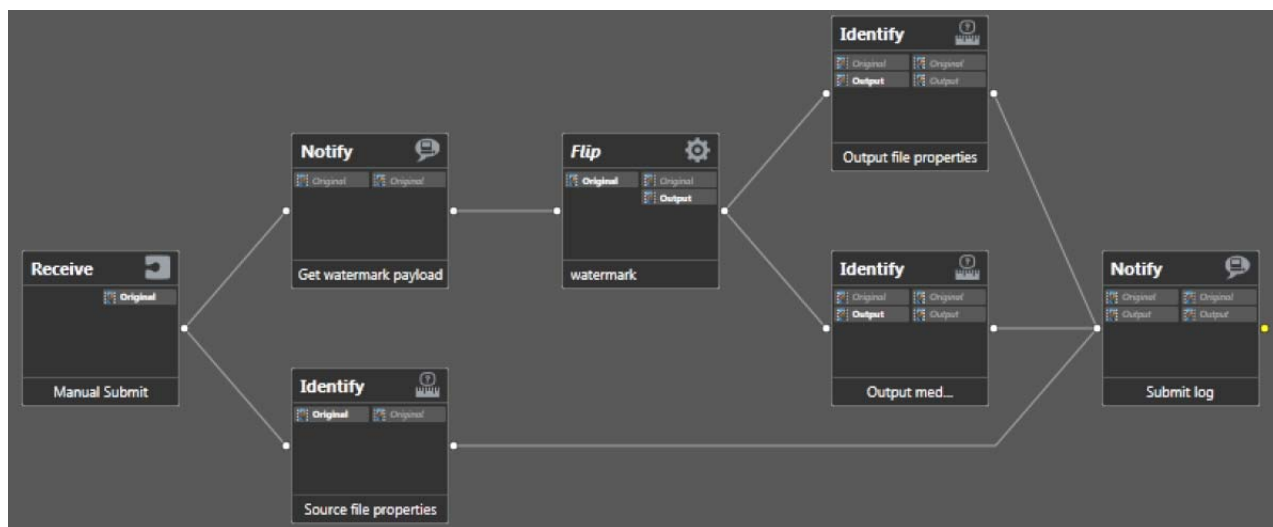
1. Install Vantage, and then install the optional Vantage NexGuard connector license using the Vantage Management Console. For details of license installation, refer to the *Vantage Domain Management Guide*.
2. Install NexGuard on the Windows Server where Vantage is installed.
3. Copy the following license and dll files that you received from Kudelski Group in the C:\Program Files (x86)\Telestream\Transcode\bin directory:
 - 2013-08-04 [ComFil_MastPlus] [357].lic (example only; yours may differ)
 - PhysConfig.xml
 - Boost*.dll (5 files)
 - Nextamp.dll
 - S_YUV_Embedder.dll
 - PthreadVC1.dll
4. Integration of NexGuard into Vantage is now complete. You can begin using NexGuard in Vantage workflows.

Example NexGuard Workflow

The workflow depicted in Figure 1 is typical of NexGuard use in Vantage workflows.

- A Receive action retrieves the source media (this may be a Watch or some other origin action, depending on how you submit media to this workflow).
- The first Notify action retrieves the NexGuard watermark data.
- The Flip action—equipped with a NexGuard filter—transcodes the media and applies the watermark.
- Simultaneously, the first Identify action also assigns the source media file path to a variable.
- Identify actions assign the output media properties and output file path to variables.
- A final Notify action submits a log entry for the watermarked, transcoded file.

Figure 1. Example NexGuard Workflow



Configuring Actions That Use NexGuard

NexGuard appears as a filter available in the action Inspectors. The following figures show the Inspectors with the NexGuard filters visible. The following notes explain NexGuard use.

Figure 2. Example Notify-NexGuard Inspector Settings.

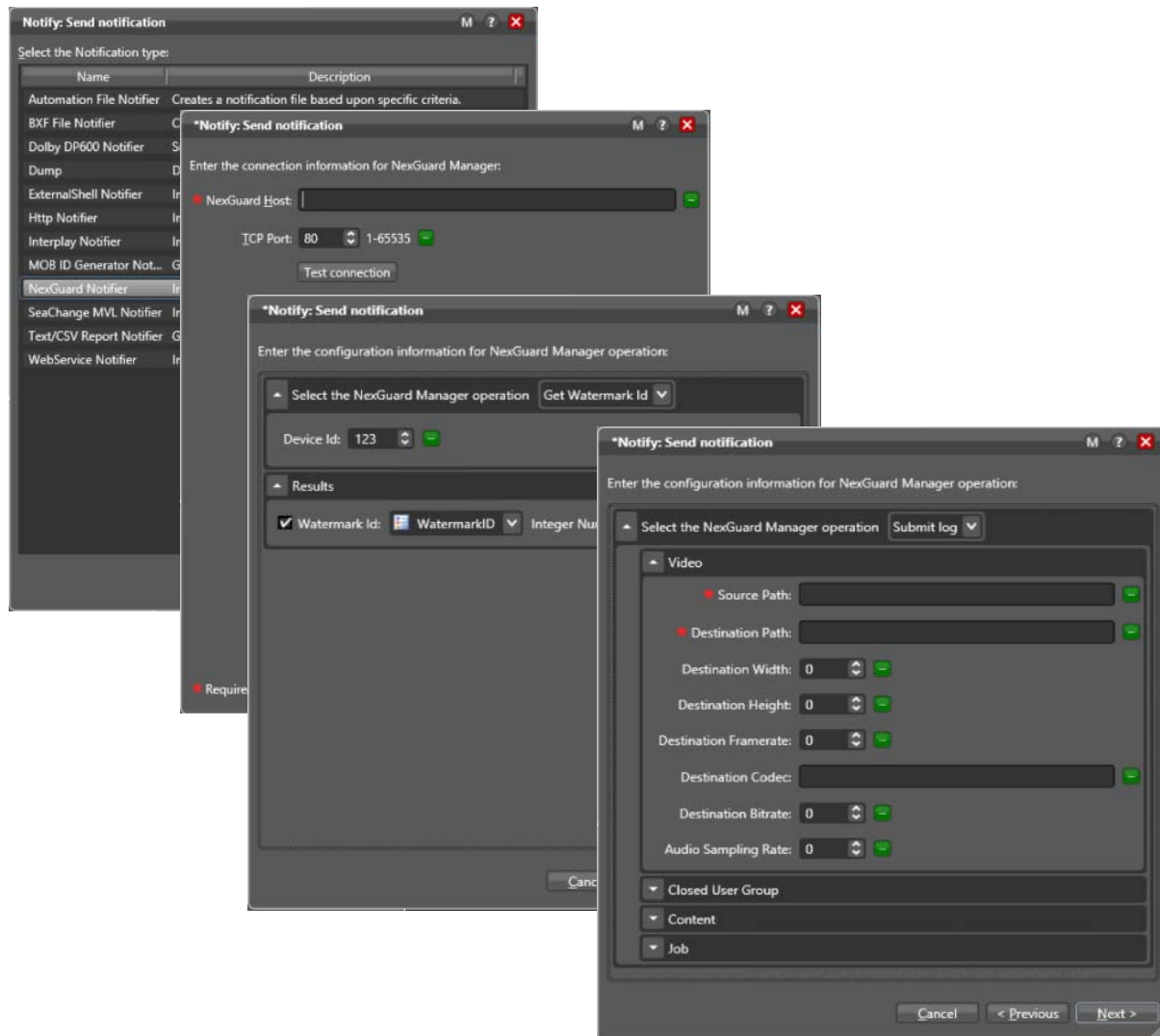
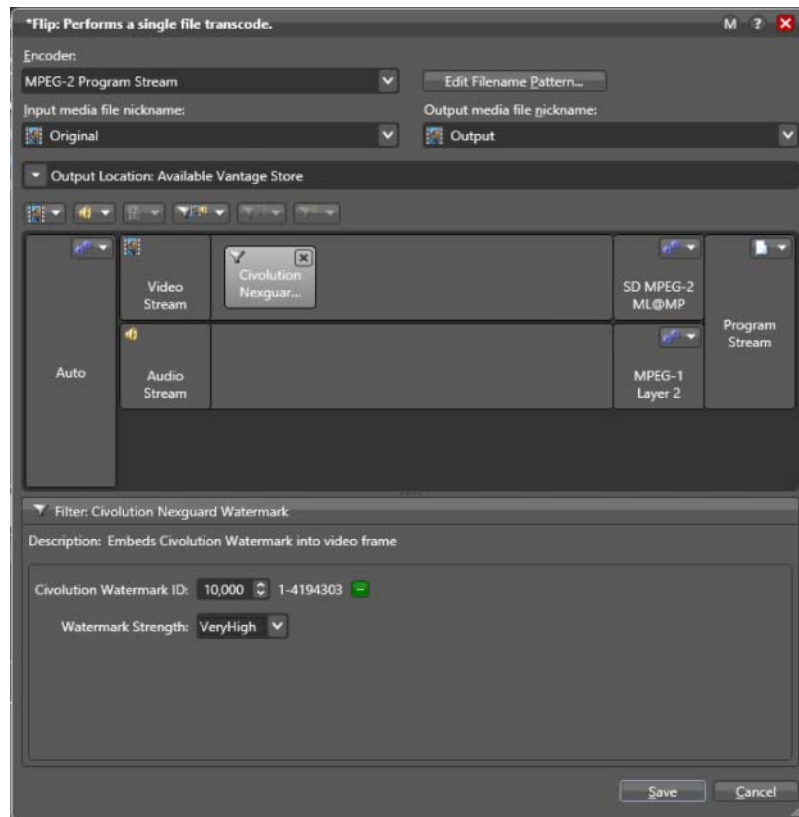


Figure 3. Example Flip-NexGuard Inspector Settings.

Steps to Implement NexGuard

1. If only a single Vantage node will be processing NexGuard jobs, the Notify Get Watermark Id action and the Notify Submit log action should be set to the same static Device Id value (this value is specified by the NexGuard Manager).

If multiple Vantage nodes in a domain will be processing NexGuard jobs, the Device Id parameter in both the Notify Get Watermark Id and Notify Submit log actions should be bound to an integer variable.

The value of this variable should be propagated by the Communicate service that executes the Notify action. For example, if node A has a Device Id of 1, and node B has a Device Id of 2, then the Communicate service on node A should be configured to propagate an integer variable value of 1 and the Communicate service on node B should be configured to propagate an integer variable of 2.

This way when a Notify action is accepted for processing by a Communicate service, it sets the Device Id value of the Notify action to the Device Id of the respective Vantage machine.

2. For a given Work Order, assign the watermark to a string variable. Then bind these two parameters to the same variable:
 - Transcode action NexGuard Watermark video filter *action Id*
 - Notify Submit Log action *Watermark Id*

3. The NexGuard Watermark is applied somewhere between 10 to 45 seconds into the clip. If the clip is shorter than this, the watermark may not be applied.
4. If Vantage attempts to apply a NexGuard Watermark without a license from Kudelski Group, this is the expected error message:
An error occurred during execution of the Transcode Task: Process Id = #### An unrecoverable error has been encountered within the Transcoder. The transcode process has stopped responding as a result of a crash. Please attempt to re-run the transcode.
5. The license from Kudelski Group determines how many concurrently watermarks a Vantage machine can do at a given time. These are referred to as "seats." If the license has fewer seats than the number of concurrently running Flip actions with the NexGuard Watermark filter, some of the Flip actions will idle at 0% until a seat becomes available. If a Flip action is unable to acquire a seat due to all the seats continually being in use, it will eventually time out as specified by the timeout value of the Transcode service.

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