

Installing and Using Baton 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

Interra Systems Baton is a market leading enterprise class file-based QC tool that includes Comprehensive Quality Checks to verify a wide variety of content transformations as well as Enterprise Scalability to handle any content on any platform without interruptions.

Baton Features

Baton provides the following QC testing features

- Container Checks—Content layout, CableLabs VoD compliance, Play time, File size, Packet size, Teletext, Ancillary data Number of audio/video streams, ARIB specifications, AS02 compliance, Digital Cinema compliance, TR101 290, AS-11 Compliance
- Video Checks—Frame rate, Bit rate, Frame size, Aspect ratio, Duration, Resolution, Video format, Picture scan, Color format, Close captions, Blockiness, Blurriness, Freeze frames, Black frames, Black bars, Color gamut, Flashy video, Luma/Chroma levels, Brightness Contrast, Pixelation, Telecine analysis, White point, Drop frame, Field order, Block errors, Stripe errors, Upconversion, Combing errors, Video drop-out, Image search, Film Grain noise, Motion Jerk, 3D Experience, Defective Pixels
- Media Containers—MXF, GXF, LXF, DVB/ATSC/MPEG-2 Transport, ASF, AVI, MPEG-2, Program/DVD VOB, 3GPP, 3GPP2, MP4, AVCF, MOV, QuickTime, QuickTime Reference Movies, DPX, HLS, MKV, MPEG DASH, AAF, CPL, ISM
- Video Codecs—MPEG-2, IMX30/50, XDCAM, D10, D11, DV(25/50/100), MJPEG2000, DNxHD (VC-3), Uncompressed RGB (in QuickTime), H.264, MPEG-4, VC-1, Apple Pro-RES, PhotoJPEG, MPEG-A, MPEG-B, Uncompressed YUV, Cineform Video, MVC, Frame Sequential, Ultraviolet CFF, Canopus HQ and HQX, ISO 9660

The combination of Vantage and Baton increases content owner and aggregator's monetization potential to a growing list of multi-screen target platforms and increases their operational efficiencies by assuring media readiness across every stage of the media content lifecycle.

Vantage and Baton

Baton is an optional, licensed feature in Vantage. This app note describes how to integrate Baton into Vantage, so that you can automate the QC process by adding Baton actions directly into your workflows.

We've also provided an example workflow depicting a typical usage pattern with Baton, along with pointers for configuring a Baton workflow using the inspector.

Vantage Baton Action Inputs

- The Vantage Baton action accepts one media file as an input

Vantage Baton Action Outputs

- Pass/Fail variable
- XML Text variable containing Baton test results in an unformatted XML string
- Detailed Test Report PDF as an attachment
- XML Report as an attachment

Baton & Vantage Version Requirements

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

- Windows Server 2008 R2 or 2012 R2
- Microsoft .NET 4.0 or later
- Interra Systems Baton Version 6.1 or later, Enterprise Edition. The software and license must be purchased and licensed through Interra Systems or an authorized Interra Baton reseller. Each copy of Baton QC must be licensed individually. Only the Enterprise Edition is supported by Vantage.
- Vantage 6.0 or later with Baton connector option for each node running Baton software.

Integrating Baton with Vantage

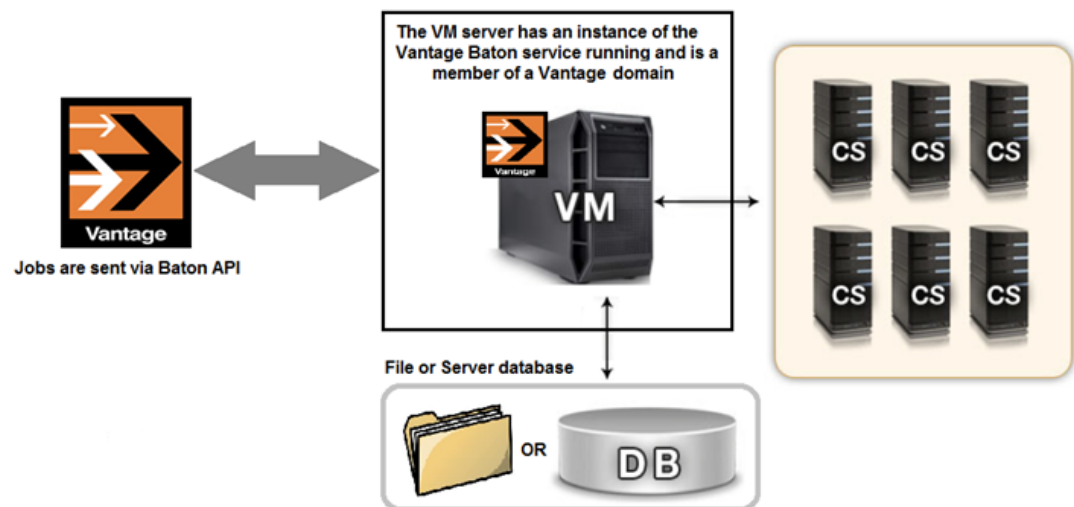
The following text and figures describe typical configurations and installation procedures. For the two cases shown, use this Vantage-Baton installation procedure.

1. Install Baton on a Windows Server where the Vantage Baton service will also be installed. Each Vantage Baton service communicates with only one Baton node running on the same host.
2. Install the Vantage Baton Service and Connector from Vantage Setup.exe (using the Custom option), or from a Telestream provided Baton patch installer. Install according to the instructions in the *Vantage Domain Management Guide*.
3. The Custom installation dialog shows a tree of components to install. Locate and select Baton and complete the installation.
4. Add the Baton service to the Vantage domain: Open the Vantage Management Console, select *Services* in the left panel, select *Add Service* in the right panel, select the Baton service from the services list, and click *OK*.

Integrating with a Single Baton Enterprise System

On the Baton VM install just the Vantage Baton service as described previously, and add the Baton service to the Vantage domain.

Figure 1. Vantage-Baton Single Enterprise System Example



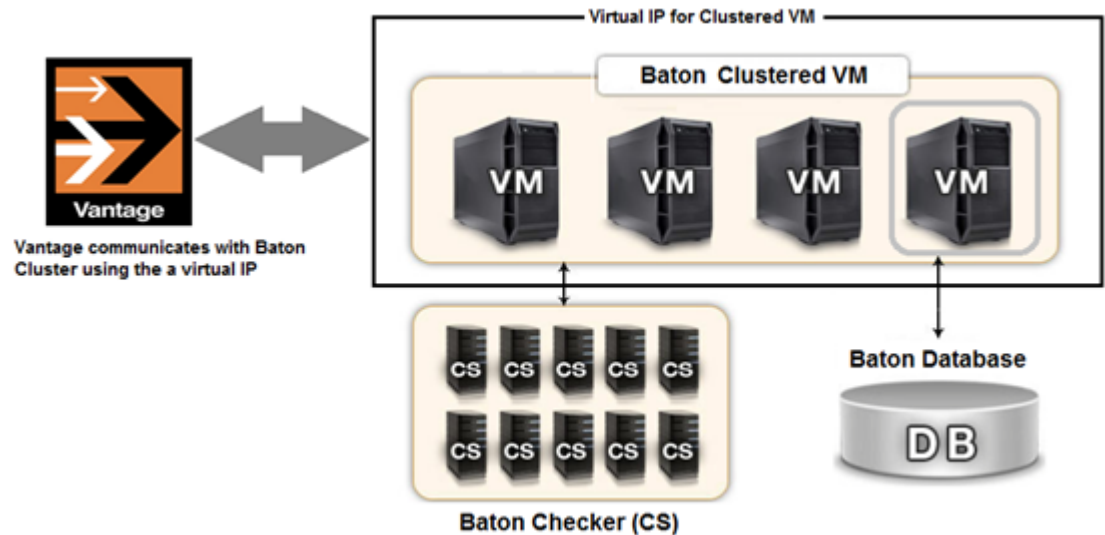
Integrating with a Baton Enterprise Cluster

Integrate the Vantage-Baton service with the Baton cluster as follows:

- Obtain the Baton Cluster or High Availability system's virtual IP address (see the Baton system administrator).
- Install the Vantage Baton Service:
 - For a standalone Vantage domain, install the Vantage Baton Service on the Vantage server.
 - For multi-server Vantage Array systems, install the Vantage Baton Service on one or more (if redundancy is required) Vantage servers in the array.
- Modify the Vantage Baton Agent config file to reflect the Baton system's virtual IP address:
 - If the service is installed on more than one server in a Vantage Array, each Vantage Baton configuration must be the same.

Note: Modifying the Baton config file should be done by a Telestream support engineer. Please contact Enterprise Support at (877) 257-6245 (US only) or +1 530-470-2036 (international) between the hours of 6am to 6pm Pacific Time Monday through Friday.

Figure 2. Baton Clustered Virtual Machines with Virtual IP Address



Limitations

- Media folder locations must be added and pre-registered within the Baton software prior to running a Baton QC job.
- FTP Server and AMP Server media locations are not supported by the Vantage/Baton integration.
- Number of concurrent Baton sessions per server is 4.

Important Note: Jobs submitted directly to a third party application, or from other systems not within Vantage management control can cause undesirable workflow delays due to lack of available third party resources or licenses. The best practice when using Vantage with third party application services is to limit the use of the third party application service to Vantage alone. This will prevent processing delays caused by resources being consumed by processes not under Vantage management control.

Installing the Licenses

Contact Telestream to request the optional Baton connector license:

- V-BATON-CONN

The Baton connector allows up to 4 Baton QC sessions on a single Vantage/Baton node. (The total number of concurrent sessions allowed in a Vantage array will vary according to how many Vantage and Baton nodes and licenses you install.)

Telestream will email you a Vantage Baton connector license with installation instructions. Follow the instructions, using the Licenses feature of the Vantage Management Console to install the new license. License installation is also explained in the *Vantage Domain Management Guide*.

Configuring File Sharing

The following procedures are required to configure your integrated Vantage-Baton system.

Sharing Files Between Servers

Since Vantage and Baton software will run on separate system servers the Vantage default store and the location of files passed to a Baton QC action must be shared to allow all servers in the domain (i.e. Baton server) access to them. Connectivity to the shared locations within the Vantage domain can be 1Gb Ethernet, 10Gb Ethernet, Fibre or any other appropriate protocol. Be aware that connectivity to shared media files can become a bottleneck if throughput is limited. Design your Vantage/Baton system with maximum shared access in mind.

Registering with Baton

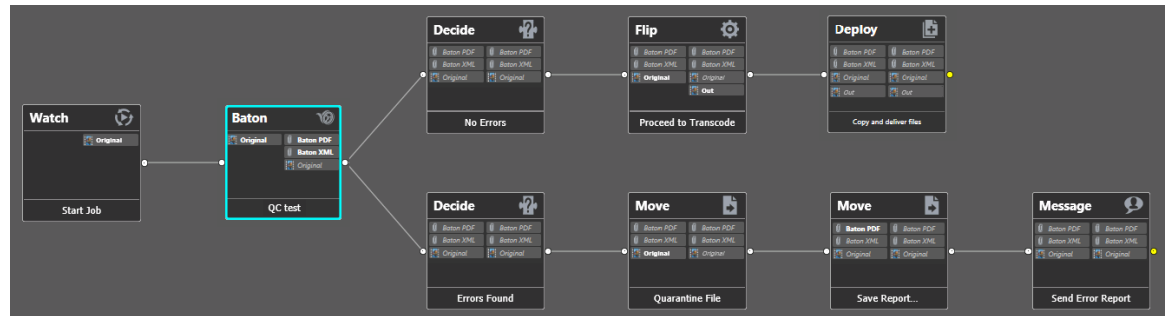
If your Baton system will be reading media files via a UNC path, those paths will need to be registered with the Baton system. All UNC path locations from which Baton will be reading media files from must be pre-registered with the Baton software. To add and register UNC path locations with the Baton software follow these steps:

1. Open and log in to the Baton main setup page.
2. On the left hand side, select the Content Locations link within the Setup section.
3. From the Content Locations frame, click on the Register Local Folder or Register Shared Folder buttons.
4. Add the UNC path Location where media file will be sourced from and optionally add a Task Limit value (Task Limit is the maximum number of concurrent processes allowed from media contained in this location).

Example Baton Workflow

The workflow depicted in Figure 1 is typical of how Baton is often used in Vantage workflows, and can serve as a template for implementing your workflows which require file-based QC processing.

Figure 3. Example Baton Workflow.



This workflow begins (as is typical) with a Watch action, configured to monitor a target location for incoming media. When the job starts, the Baton action is executed (and the media file passed to Baton) to perform a given QC test before transcoding the media, to determine if it meets the specified standards or requirements which you specified in the Baton template being employed.

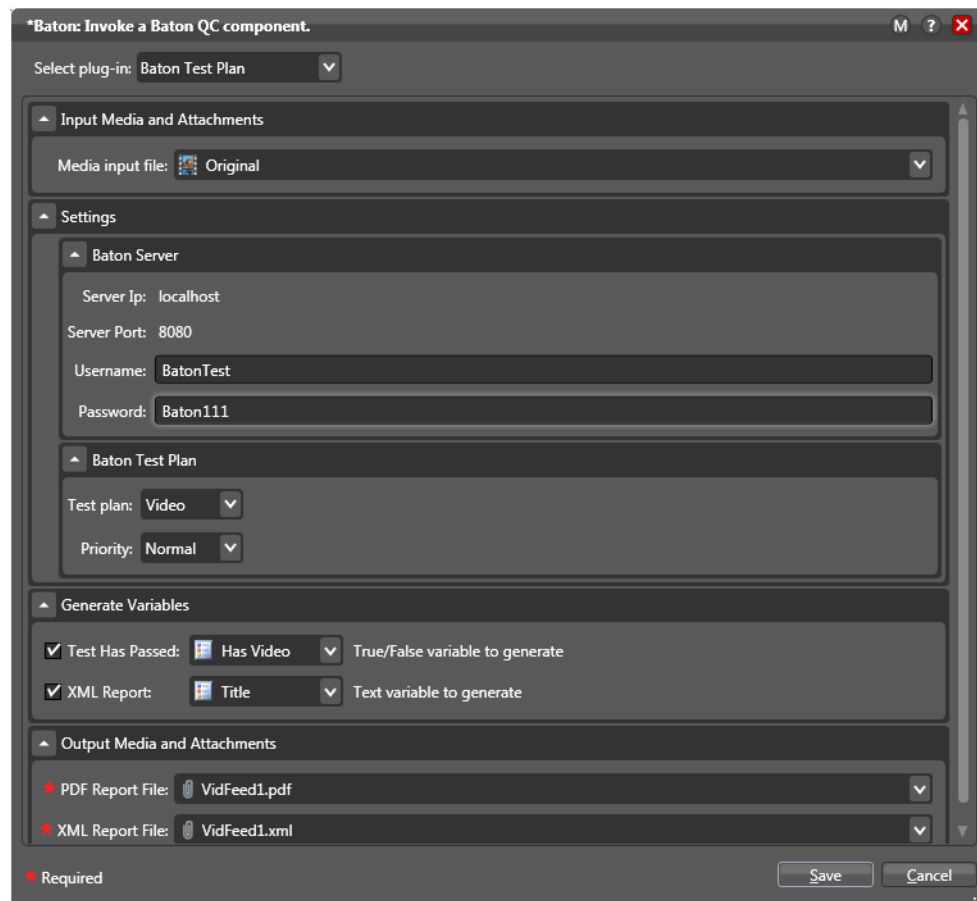
When Baton has completed the specified tests, Baton assigns result values to the Test Has Passed variable and returns it to Vantage, along with the path to the PDF and XML files which were generated. Next, the workflow executes a Decide action and sets the state to Success if the Test Has Passed variable is 0, encodes the media using the Flip Action, and deploys the transcoded media.

However, if the Test Has Passed variable is 1 or more (as tested by the second Decide action), the media file is quarantined. This branch has two Move actions, the first of which moves the file to a quarantine folder, and the second moves the PDF report (with a unique filename) to the same quarantine folder, for analysis and further action by an operator, based on email notification by the Message action.

Configuring Baton Actions

The Baton inspector, shown in Figure 2, allows you to specify the input file, and specify how results are passed back to Vantage, as depicted below in the Baton inspector. If you have multiple Baton servers, please contact Telestream Support for guidance in setting up Baton actions.

Figure 1. Example Baton Inspector.



To configure the Baton action, display the Baton action inspector.

First, from the Select Plug-in drop-down menu, select Baton Test Plan.

In the Input Media and Attachments section, select the input media file you want Baton to examine, by selecting its nickname. Typically, this is the input media file specified by the Watch action, but Baton might also be used, for example, for examinations of Flip and IPTV VOD actions.

The Setting section includes fields for entering your Baton Server connection and login information and selecting the Baton Test Plan to use for this action. Refer to Interra Systems for information about creating test plans for Baton.

The Baton Test Plan section allows you to access a test plan that you create using the Baton application. After creating a Test Plan but before you can access it in Vantage, you must place the Vantage Baton Service in Maintenance Mode using the Vantage

Management Console, and exit the service from Maintenance Mode. Then you must create a new Baton action to access to your Test Plan.

Note: Note: You can access the Baton Test Plan *template* without putting the Vantage Baton service into maintenance mode; that step is only required for plans you have modified or created.

In the Generate Variables section, there are two variables that can be populated by the Baton test results. The first is a simple the "Test Has Passed" True/False variable. This variable will be set based on the test results generated by the Baton software. It can be used, for example, in a downstream Decide Action. The other variable is a text string variable that contains test result data in unformatted XML text. This variable data can be used in downstream actions.

Finally in the Output Media and Attachment section, two attachment files can be produced—one in a standard human readable PDF and another as a fully formatted XML report file. You should specify nicknames for these PDF and XML report files, which are generated each time the workflow runs and Baton examines a file. The attachment nicknames you specified can be used downstream as part of a Move, Copy, Message or other action, so they can be used outside of Vantage.

Limitations and Considerations

The Vantage Baton integration offers a very wide feature set; however, there are known limitations and other considerations:

- Baton QC should run on independent servers and should not be installed on systems running other Vantage services.
- Only Windows-based NTFS file systems folder paths are currently supported by the Vantage Baton integration.
- Any UNC paths from which Baton will be reading media files must be pre-registered with the Baton software.
- General Baton setup and the creation or modification of Baton Test Plans is done from within the Baton user interface.
- Direct interaction with Baton MediaPlayer via links within the Test Report PDF is not supported.
- In depth review of test results is done directly through the Baton user interface.
- For additional details, see your IT administrator responsible for managing the Baton installation.
- FTP Server and AMP Server media locations are not currently supported by the Vantage-Baton integration.
- To see a user-created or modified Baton Test Plan in Vantage, you must first create the Test Plan using the Baton application. Next, set the Vantage Baton service to maintenance mode and exit it from maintenance mode. Then create a new Vantage Baton action to access the newly created or modified Test Plan.

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