Installing & Using Vantage with AsperaOpen

This App Note applies to Vantage Version 7.2 and Lightspeed Live Capture 3.0 and later

telestream

Synopsis

The Vantage Aspera connector works with the IBM® Aspera Node API to achieve high speed file delivery. It enables the new AsperaOpen file system type leveraging IBM/Aspera's FASPStream™ technology which now enables Vantage/Lightspeed Live Capture to write bit for bit replicas to remote Aspera Enterprise Servers (required) as the files are growing/being written locally.

Telestream has tightly integrated our connector with the Aspera FASPStream™ technology for direct operation with Vantage/Live Capture, enabling automated high-speed transfer of video and data processed into and out of Vantage/Live Capture workflows. This integration allows Vantage/Live Capture systems to interactively browse, upload, and download media content with any Aspera server endpoint, whether that be a fully featured Aspera Enterprise Server system or a Point-to-Point node. All you need to enable this capability is a Vantage AsperaOpen connector license to enable the built-in feature.

The modular nature of Vantage/Live Capture systems makes it easy for users to create workflows that incorporate Aspera ingest and delivery. Direct product integration ensures a seamless user experience in workflow creation, and full support for all of the Aspera high-speed transfer platform features, including support for all client applications, encryption over the wire and at rest, adaptive rate control, management and notification, and support for all types of storage options on premises and in the cloud.

The Vantage Aspera connector also enables Aspera faspex™ and Aspera Enterprise Server file system ingest/delivery. (See http://www.telestream.net/pdfs/app-notes/app_Vantage_Aspera.pdf). Now Vantage offers AsperaOpen as another way to interface with Aspera Enterprise Servers.

Features of Vantage/LiveCapture Aspera Connector

The Vantage Aspera Connector enables three Aspera modes for ingest and delivery using Aspera technology:

- **AsperaOpen mode (Aspera Enterprise Server Open)** enables Vantage to connect directly with an Aspera Enterprise Server allowing for direct transfer of open and growing files. This mode is the subject of this app note.

  In this mode you can receive and transmit near-live media from point to point. To do so, enable the Open Workflows feature in Vantage Management Console > Settings & Options > General Enable Open Workflows, and set all compatible workflow actions to Open Workflow mode. Using this method, files that are still growing, such as those on a Lightspeed Live Capture system, can be processed by and sent to the Aspera server (see the following topic for more information).

- **The Aspera Enterprise Server mode** allows you to access files and folders on the Aspera Enterprise Server as you would do with any typical file system. The configuration, management and functionality of an Aspera Enterprise Server outside of the file system connection are not part of the Vantage integration. See http://www.telestream.net/pdfs/app-notes/Vantage_Aspera_Enterprise.pdf for more details on Aspera Enterprise Server mode.)

- **Aspera faspex** delivery is enabled via the Vantage Aspera faspex Delivery Action. This mode of Aspera transport allows for delivery of faspex packages to any available Aspera faspex end point. See http://www.telestream.net/pdfs/app-notes/app_Vantage_Aspera.pdf for more details on Aspera faspex™ mode.

Real Time Editing with Capture and AsperaOpen

As mentioned previously, Telestream Vantage and Lightspeed Live Capture combined with Aspera's FASPStream technology can work together using open-file workflows that enable production teams to work on live video feeds from remote locations in near real time.

The processing sequence looks like this:

1. A Lightspeed Live Capture system captures a live feed at the event site.

2. The Capture system writes the live feed to local media storage.

3. Simultaneously, a copy of the growing captured file is sent over unmanaged Internet to a remote Aspera file server using FASPStream™ Technology.

4. At the remote post production facility, the incoming growing file is immediately available for editing or processing from within the Aspera Server storage. Applications such as Adobe Premiere Pro or Final Cut X can open the growing files for editing directly, or Vantage can automatically begin processing the content for use from within an Avid system by checking the asset into Interplay. Once checked into Interplay an editor can edit the growing file in Media Composer using Frame Chase Edit While Capture (EWC).

5. In addition to enabling the editing of growing files Vantage also can create a wide variety of media file types and deliver them to an assortment of delivery locations, all while the source files are growing in Aspera Server storage.
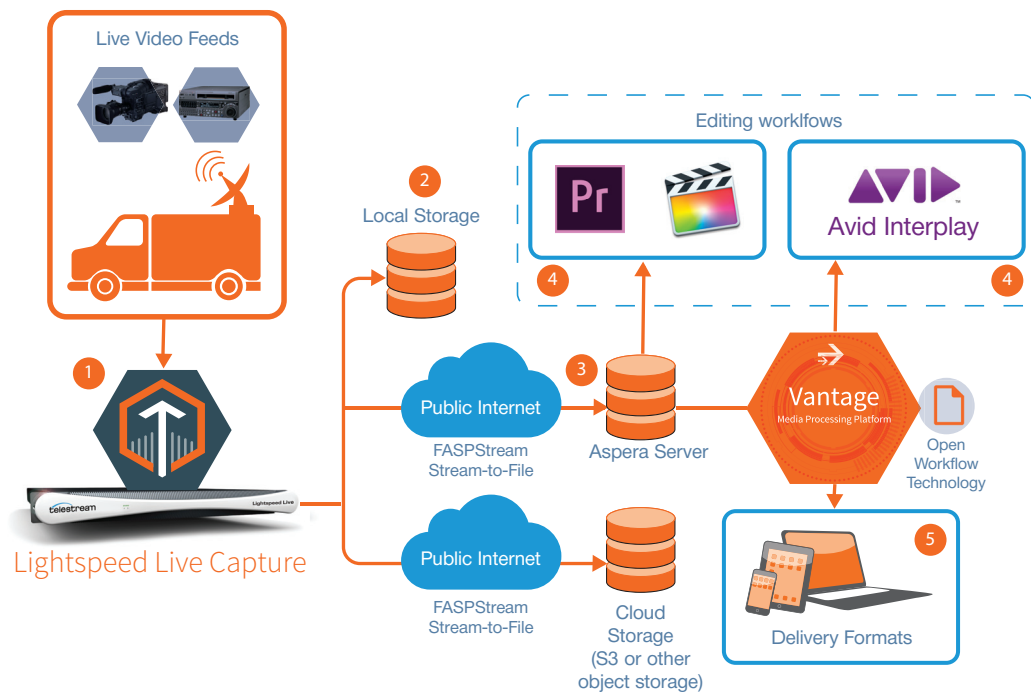
The Telestream Partner brief entitled, *Real Time Editing Over Unmanaged Internet with Telestream & Aspera Integration*, explains the process in greater detail. For help constructing such a system, contact your Telestream Sales representative.

Installation Requirements

The Vantage AsperaOpen integration with Aspera's Node API is available with Vantage 7.2 or later installations. If you do not currently have Vantage 7.2 or later, contact Telestream for an upgrade including the AsperaOpen capability.

Vantage7.2/Lightspeed Live Capture 3.0 or later

- Vantage 7.2 or later with the Aspera Software option (V-ASPERA-SW).
- Valid Vantage license that includes the Vantage Aspera software capability (see Licensing below).

Aspera Server Requirements

Vantage support for AsperaOpen file system access requires:

- FASPStream™ SDK version 3.8.
- IBM Aspera Enterprise Server or IBM Aspera High-Speed Endpoint version 3.8 installed with a valid license and a valid User Account with the appropriate Read/Write permissions. Consult your Aspera Enterprise Server administrator for details.
- In order to transfer with the node, the node's hosts file must contain an entry 127.0.0.1 localhost. The hosts file can be found in /etc/hosts on UNIX-like nodes.
- Configure the node for HTTP Basic Authentication by creating a node username and password. See Node API Authentication and Authorization for instructions.
- Aspera recommends setting SSH MaxSessions to 100 on Aspera Enterprise Server.

Licensing

To enable AsperaOpen (Aspera Enterprise Server Open), Aspera Enterprise Server, and Aspera faspex™ delivery within your Vantage/Live Capture system, you must obtain the V-ASPERA-SW license option from Telestream. Vantage does not restrict the number of simultaneous connections to Aspera Enterprise Servers. Consult with your Aspera Enterprise Server administrator regarding restrictions on the Aspera Server side.

Installing and Configuring Vantage and Aspera

This option should be considered by any Vantage customer who requires access to a remote Aspera Enterprise Server from within Vantage open workflows. It is particularly useful when using Lightspeed Live Capture to capture and copy open files using Aspera.

Note: Telestream does not resell Aspera software. Telestream supplies an integration option allowing direct access to an Aspera server's file systems. The Aspera software and instructions for installing it can be obtained from Aspera or an authorized Aspera reseller/dealer.

The AsperaOpen (Aspera Enterprise Server Open) and Aspera Enterprise Server feature is enabled through the V-ASPERA-SW license option applied to your Lightspeed Live Capture or Vantage server systems, either standalone or in a multiple server domain array.

Installing Vantage and Aspera

Follow these steps to install the Vantage Aspera Enterprise Server integration on your Vantage system.

1. If you do not currently have one of the required Vantage versions, download the software from www.telestream.net and obtain a license from Telestream that includes the Vantage Aspera software option (V-ASPERA-SW).

2. If you already have one of the specified Vantage versions, obtain a license from Telestream that includes the Vantage Aspera software option (V-ASPERA-SW).

3. If necessary, install the required Vantage version (or Vantage clients) on all systems, being sure to select and install the Transport service (part of all standard product installations), which includes AsperaOpen (Aspera Enterprise Server Open) and Aspera Enterprise Server.

4. Apply the V-ASPERA-SW license using the Vantage Management Console, Licenses feature.

Configuring the Vantage AsperaOpen Connection

To make it quick and easy to use the AsperaOpen server connection repeatedly without entering connection information each time, you may (optionally) want to add an Aspera server location as an address to remember in the Vantage Folder Address Book.
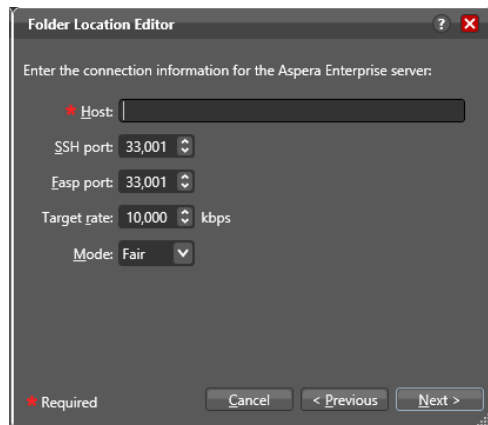
a. In the address book, click the New Folder icon and click the Modify button.
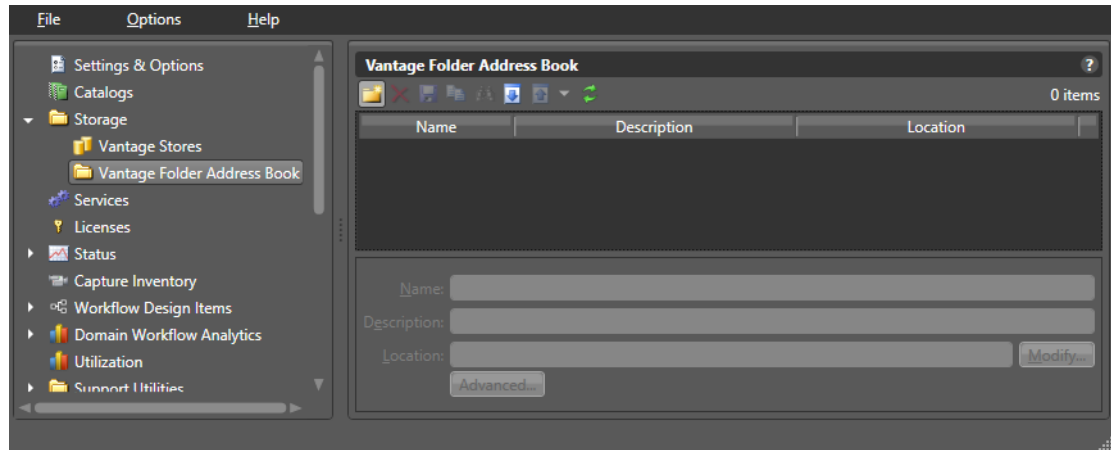
b. Select AsperaOpen from the list of server types.
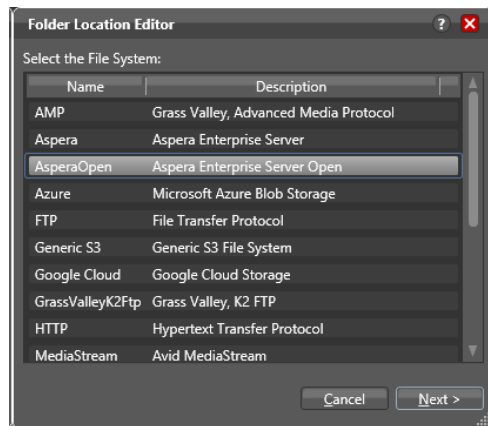
c. Enter details: Host (name), SSH port number, Fasp port number, Target rate, and Mode.

d. Enter your Aspera User name and Password or SSH key (click Set Key to enter details.

e. Specify the address book folder where you want the Aspera connection stored, and click Finish to save the connection in the Address Book.

Now when you refer to this address book name from a Vantage action, the AsperaOpen connection can be opened and files sent automatically.

Example AsperaOpen Workflows

AsperaOpen can be used with Vantage workflows and with Lightspeed Live Capture workflows. The following examples show how to set up your workflows to deploy to an AsperaOpen server.
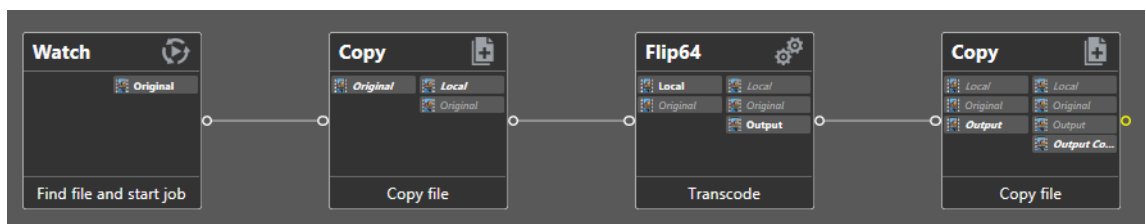
Basic Vantage AsperaOpen Workflow

The following workflow example shows how to ingest and deploy files from Vantage to an AsperaOpen Enterprise Server. The advantage of AsperaOpen, of course, is that you can now use Open Workflows in Vantage and AsperaOpen to copy files that are still open and growing, providing more timely video and data distribution.

Note: Some Vantage processes, such as transcoders, require that files be accessible locally, or through a UNC path, before they can be consumed. In the case of pulling files from an Aspera Server, this would require a Copy action prior to such workflow actions.

In the following workflow a Copy action is used to create a locally accessible file for the Flip64 action to consume. The portion of the workflow after the Watch and before the Copy can include any other actions or functions, such as an Analyze action. The Copy action delivers the workflow output to the Aspera Enterprise Server.

Configuration of the action Inspector for this workflow is described on the following pages.

Basic Capture AsperaOpen Workflow

Open files being created in Lightspeed Live Capture can also be sent to the Aspera server using a Vantage Capture open workflow with a Copy action set to AsperaOpen. Any number of open actions could be used between the Capture and the Copy, depending on your needs.
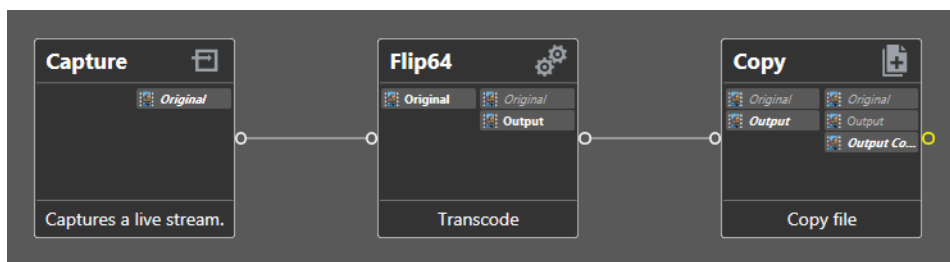
Configuring Actions to Use AsperaOpen

Follow these steps to configure Watch and Deploy actions to use AsperaOpen:

1. Create an Open Workflow using a Deploy action to distribute the media file to the Aspera server, and include any processing actions you may need. (See the *Vantage User Guide* and the *Vantage Domain Management Guide* for details about Open Workflows.)

Figure 1. Example Watch and Deploy Action Inspector Settings for AsperaOpen Server.
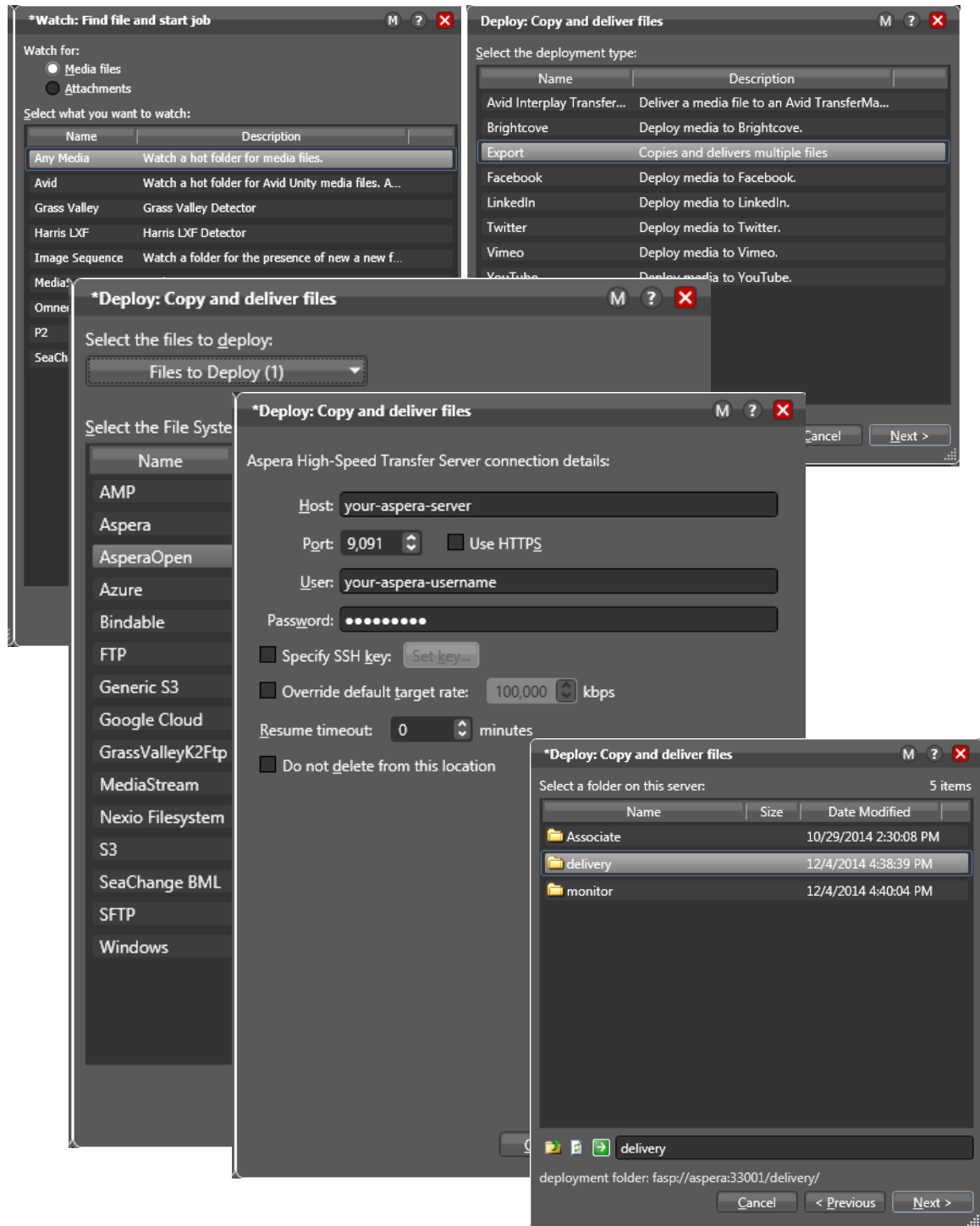
2. Select *Any Media* in the Watch action.

3. Select *Export* in the Deploy action.

4. Select *AsperaOpen* as the Deploy destination.

5. Enter the host name, user name, password, and connection details so Vantage can connect to the Aspera Server using your account.

> **Note:** High speeds can overload a network link in some circumstances; choose the speed and other settings judiciously.

All connections to the Aspera server are authenticated to a user account via SSH, either by password, or public-key model. If you would like to secure the connection using the public-key model, select SSH key and use Set key to enter the private key. Keys must be in Open-SSH format. Add a private SSH key to authenticate from Vantage. The server must be pre-configured with the matching public key.

The key generation process will ask for an optional passphrase. If you choose a passphrase, the key will be encrypted using the passphrase as the encryption key. The passphrase is necessary any time the private key will be used. This is to protect the private key in case it becomes compromised. Consult your Aspera Enterprise Server administrator for SSH key details.

Vantage will connect to the Aspera Enterprise Server using the server address and account credentials you provided. If the connection attempt to the server is not successful, a dialog will indicate an unsuccessful connection. Verify and re-enter the correct server address and login credentials.

6. Select the folder on the server where you want the files delivered.

7. Activate the workflow, and submit a file to test for successful workflow operation.

When the workflow runs, it delivers its output to the repository specified by your Deploy action configuration.

More Information about Aspera Server

For more information about Vantage and Aspera Enterprise Server, visit the following Telestream web page: http://www.telestream.net/telestream-support/vantage/support.htm

Sales and Support Contacts

Aspera Enterprise Server software can be obtained from Aspera or an authorized Aspera reseller/dealer.

- **Sales contact:** Web - http://asperasoft.com/contact-us/, Email - sales@asperasoft.com
- **Support:** Web - https://support.asperasoft.com/home, Email - support@asperasoft.com

Vantage Aspera Installation, licensing and user documentation can be obtained here:

- http://www.telestream.net/pdfs/app-notes/app_Vantage_Aspera.pdf

Telestream Support Contacts

- **Web Site:** http://www.telestream.net/telestream-support/vantage/support.htm
- **Support Email:** support@telestream.net

Terms and times of support services vary, per the terms of your current service contract with Telestream.

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