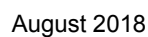




**This App Note
applies to
Vantage
Version 7.1 & later**

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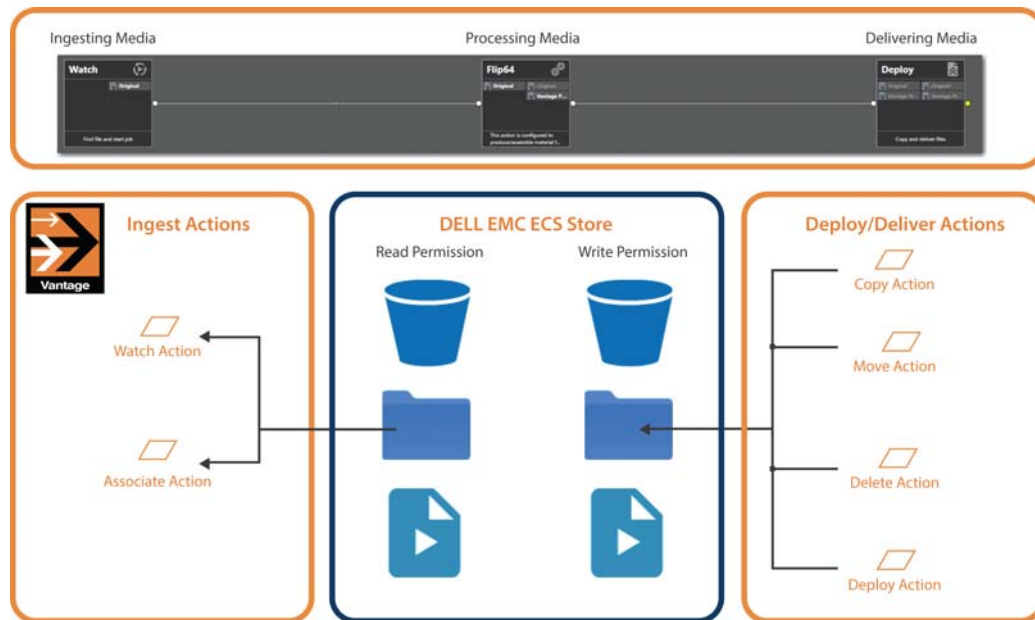
Note: This guide is written for video professionals who are familiar with using Vantage. To implement applications in Vantage, you should know how to create workflows and submit jobs. If you aren't familiar with Vantage, we suggest that you review the *Vantage User's Guide* and *Vantage Domain Management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



Synopsis

DELL EMC ECS offers software-defined object storage designed for traditional and next-generation workloads with scalability, flexibility and resiliency.

Vantage workflows can ingest media files from ECS storage for processing, and they can deploy transcoded media to ECS, as depicted in this illustration:



Typically, a Vantage workflow has three phases: ingest, process, and deliver. In the ingest phase, you can use Vantage's Watch and Associate actions to obtain media and related files from the ECS for processing—typically, transcoding to new media formats and related tasks. Workflows can also deliver the output media and related files to a target folder in ECS using Copy, Move, Deploy and Delete actions.

Telestream Software and License Requirements

You can integrate DELL EMC ECS into workflows for file ingest and delivery in any supported Vantage domain and access it via S3, without any special Telestream licensing requirements.

Note: Telestream does not recommend a specific cloud security policy and Telestream does not recommend how you configure permissions in your object store. You are responsible for granting these permissions to Vantage services in accordance with your organization's cloud security policy.

ECS-Accessible Workflow Actions

Vantage provides several actions you can use in your Vantage workflows to ingest (read) media and other files from your ECS, and other actions to deliver (write) files to your ECS, as well as delete them.

For details on any action in a workflow, open its Inspector in Workflow Designer and display the man page—click the M icon in the upper right corner of the panel.

Using Watch | Associate Actions to Ingest Media Files

Both actions are part of the Monitor group, and are executed by the Monitor Service.

A Watch action continually monitors the target directory on the specified file system for new files - you can choose to monitor for media files or other files associated with a media file - referred to as an attachment. A Watch action initiates a job each time a new media file is discovered and passes control to the next action in the workflow.

Associate actions are designed to make additional files accessible to the workflow after the job has been started by an origin action. Associate actions are not origin actions—they cannot be the first action in a workflow, because they are not designed to submit jobs. After the job has started (with a Watch action, or a manual or SDK submission, for example), the Associate action blocks the job from continuing execution until it has identified the metadata or other type of file (as specified by file selection options you set). It ingests the file and assigns the nickname you specify so the file can be utilized by downstream actions, and then passes control to the next action in the workflow.

You configure Watch and Associate actions to access ECS-based media (or other files) by configuring them with the Generic S3 connector.

The Monitor service that executes a given workflow's Watch and/or Associate actions must have read access to the ECS bucket to function properly.

Using Copy | Move | Deploy | Delete Actions to Deliver Media

Vantage also provides several actions to perform file utility tasks: duplicating or moving files (deleting the source after a successful write) to a target folder on the destination ECS, and, in the case of Deploy, delivering one or more files to the destination.

To configure a Copy and Move action to deliver media to an ECS, you must first create a Vantage Folder in the Vantage address book and configure it to identify your target folder. Then, you can select this folder when configuring the action.

The benefit of using a Copy or Move action to deliver a file is that you can dynamically recreate the folder path when delivering the file, and you can also dynamically create the file name. See the man page for details.

You use the Deploy action to write files to an ECS by configuring it with the Generic S3 connector.

The Delete action is configured with the nickname of the target file to perform its task—the nickname always maintains the current location of the file it represents.

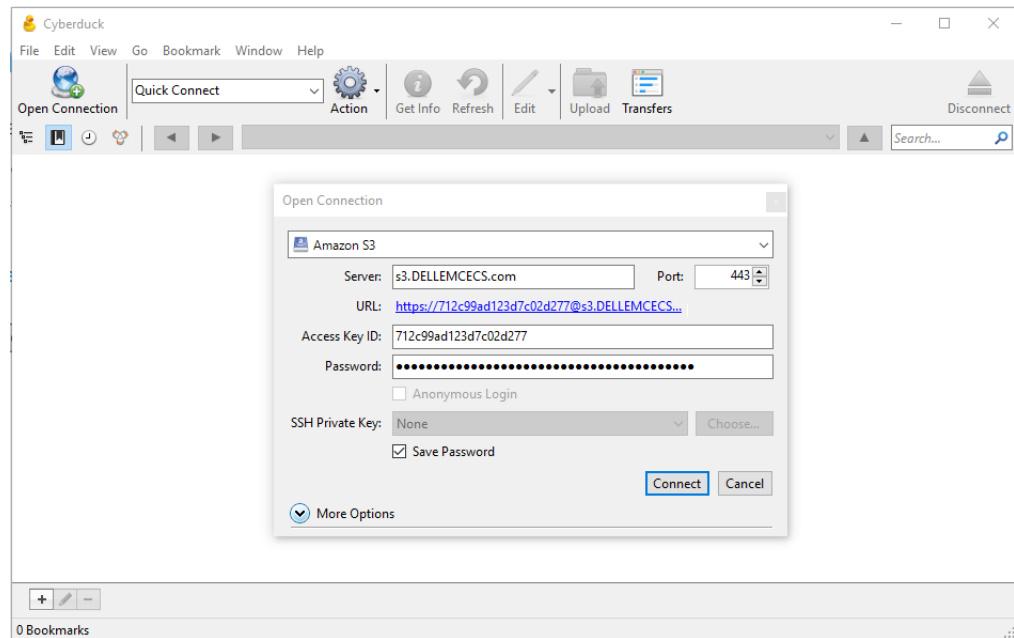
Verifying ECS Access

Before implementing an ECS-based Vantage workflow, Telestream recommends that you verify that you can access the target ECS buckets and folders independently of Vantage, directly from the Vantage domain server where the Vantage services will execute each of the actions in your workflow.

Note: If you have a distributed Vantage domain (a Vantage array), test access to your ECS system directly from the server where the Vantage service executing your actions are hosted.

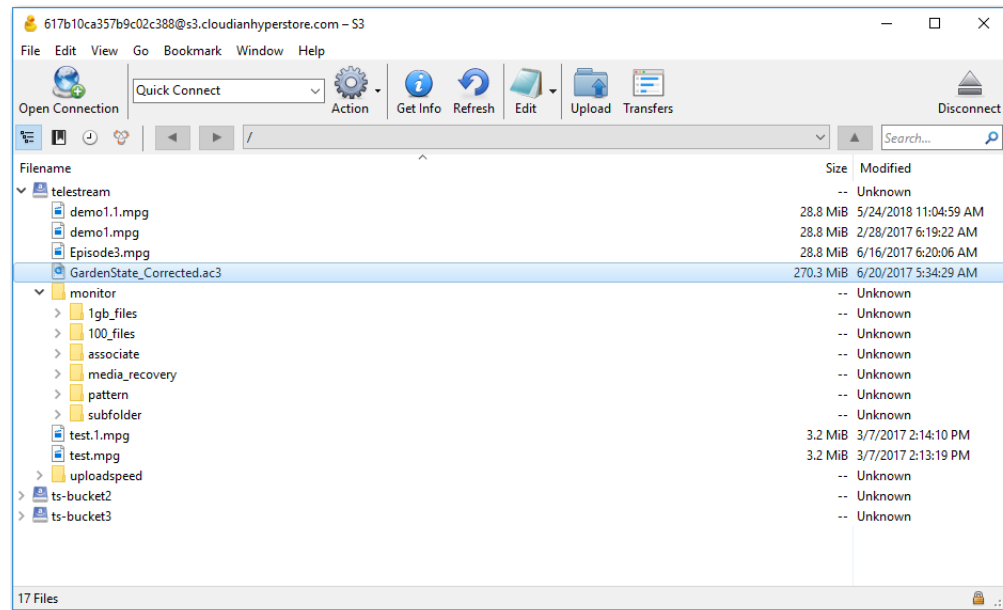
To verify ECS access, use a cloud storage browser. This example uses Cyberduck.

1. Launch Cyberduck and create a new connection (these credentials are scrambled):



2. In the Open Connection dialog, select Amazon S3 as the file server type.
3. Enter your URL, access key ID and secret key and click Connect.

If the connection is successful, you can view the objects in the ECS store:



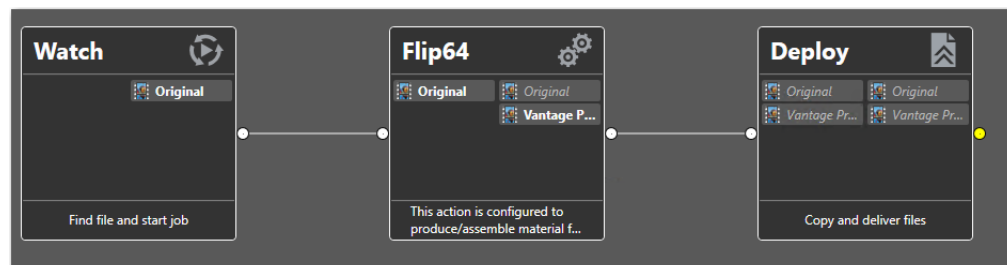
If the connection fails, trouble-shoot the problem and retry until the connection succeeds.

Creating a Sample ECS Workflow

This topic illustrates how you can create and configure a Vantage workflow to ingest media from an ECS folder, transcode the file, and then deliver the new file back to another folder in the ECS.

This is the simplest example of ingesting media from an ECS, processing it and generating a new media file, and delivering it to a folder in an ECS.

Files ingested by this workflow are submitted to Vantage by the Watch action. When a new file is detected, it ingests the file and starts a job to execute the workflow—transcoding the ingested file into a new video using the Flip64 action. Then, the new file is delivered back to the ECS in another folder:



Configuring the Watch Action

When you activate the workflow, the Watch action utilizes the S3 interface to poll the specified storage for new files. For each new file detected, it ingests the file and starts a Vantage job to execute the workflow.

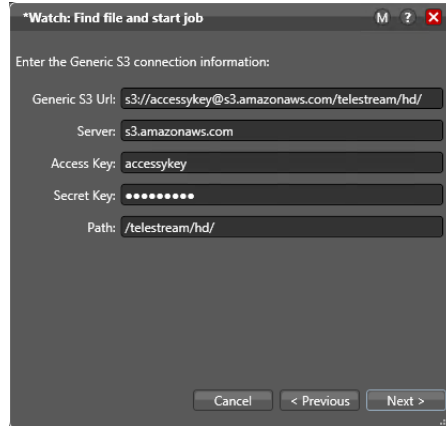
The Generic S3 component enables interaction with S3 endpoints which are not specifically associated with Amazon AWS S3 storage, providing general-purpose interaction with storage providers which utilize S3 for access.

Note: You can also access your ECS using the Associate action, depending on your workflow requirements. For example, you might need to pick up a sidecar file and pass it through the workflow with your media file.

To configure the Watch action, open the Watch inspector and follow these steps:

1. Click Watch for > Media Files, and select Any Media.
2. In the Select File System panel, select Generic S3.

3. Configure the Generic S3 Connection Information panel with your settings:



Note: The Connection panel fields are linked together to make it easier to create a properly-formed S3 URL and maintain flexibility. For basic use, just enter your data in the Server, Access Key ID, Secret Access Key, and Path fields. As you enter information, the Generic S3 URL field is auto-formatted (the Secret Access Key data is hidden).

For advanced use, you can manually enter the entire URL in the Generic S3 URL field. You can also enter parameters that are not in the panel as a source field (for example, a timeout value, if needed) directly in the URL field; this provides the broadest use. If you enter or edit data in the Generic S3 URL field for linked parameters, the source field associated with the parameter is also updated to reflect your changes.

Generic S3 URL. The URL that identifies the S3 system, including the protocol and all parameters. The protocol is supplied automatically and can not be changed. This field is auto-populated as text is entered in the Server, Access Key, Secret Key and Path fields.

Server. The full name of the S3 endpoint. Enter the S3 endpoint name without specifying the protocol. For example, *s3.DELLEMCECS.com*.

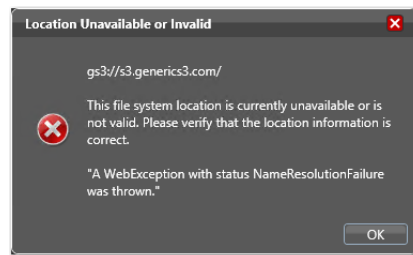
Access Key ID. Enter access key ID for the account.

Secret Access Key. Enter the secret access key for the account.

Path. Specifies the path to your target bucket or folder. Manually enter it or specify it by browsing the buckets on the next panel. (You can not save files to the root—you must supply at least a bucket.)

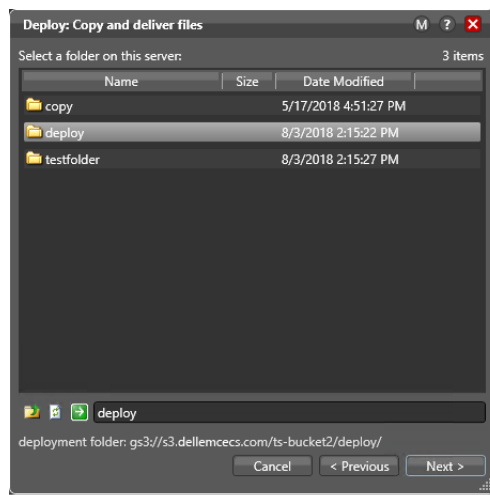
Note: You can manually enter an existing path, or you can enter a path with new folders—the workflow will create them when you press Next to log in to the store.

Click Next to connect to your ECS. If the system is unavailable or you have mis-configured the Watch action, Vantage displays this error:



Correct the problem and retry.

When Vantage successfully connects to your ECS, you can view and browse your buckets:



Select the target bucket or bucket/folder path to monitor. Notice that the watch folder path is updated at the bottom of the panel—this path is included automatically in the URL.

Click Next to configure your monitoring settings for this action, and optionally, logging options. For details, display the man page—click the M icon in the upper right corner of the panel.

When you're done configuring the Watch action, click Finish to save your settings and close the inspector.

Configuring the Flip64 Action

The Flip64 (or any other transcode) action can be configured to transcode the input file into a specific format, and create a new video file. (How you configure the transcoding action is irrelevant to this example workflow.)

Configure the Flip64 action to meet your transcoding requirements. When you're done, click Finish to save the action and close the inspector.

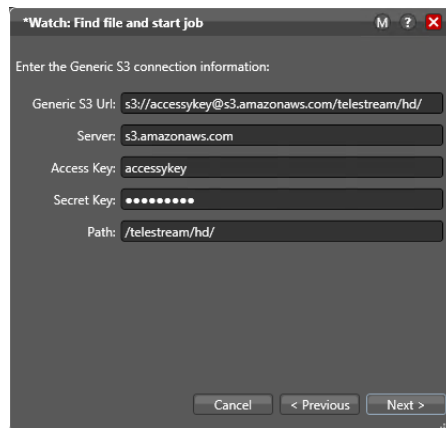
Configuring the Deploy Action

The Deploy action should be configured to deliver the output file to a specified bucket in your ECS.

Note: You can also use other Transport actions, including Copy and Move to deliver files, as well as Delete to remove files on your ECS, based on your workflow requirements.

To configure the Deploy action to replicate the encoded output file to a specific bucket, open the inspector and configure these settings:

1. On the Select Deployment Type panel, select Export.
2. On the Select Files/File System panel:
 - Check the files to deploy (listed by nickname)
 - Select the Generic S3 file system
3. Configure these settings in the Generic S3 Connection Information panel (this is the same panel as in the Watch action):



Note: The Connection panel fields are linked together to make it easier to create a properly-formed S3 URL and maintain flexibility. For basic use, just enter your data in the Server, Access Key ID, Secret Access Key, and Path fields. As you enter information, the Generic S3 URL field is auto-formatted (the Secret Access Key data is hidden).

For advanced use, you can manually enter the entire URL in the Generic S3 URL field. You can also enter parameters that are not in the panel as a source field (for example, a timeout value, if needed) directly in the URL field; this provides the broadest possible use. If you enter or edit data in the Generic S3 URL field for linked parameters, the source field associated with the parameter is also updated to reflect your changes.

Generic S3 URL. The URL that identifies the S3 system, including the protocol and all parameters. The protocol is supplied automatically and can not be changed. This field is auto-populated as the Server, Access Key, Secret Key and Path fields are configured.

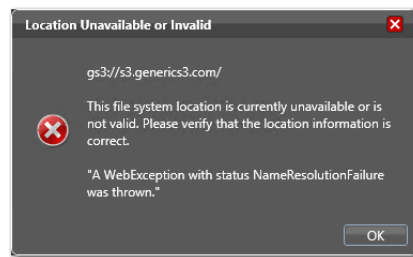
Server. The full name of the S3 endpoint. Enter the S3 endpoint name without specifying the protocol. For example, *s3.DELLEMCECS.com*.

Access Key ID. Enter access key ID for the account, analogous to a user name.

Secret Access Key. Enter the secret access key for the account, analogous to a password.

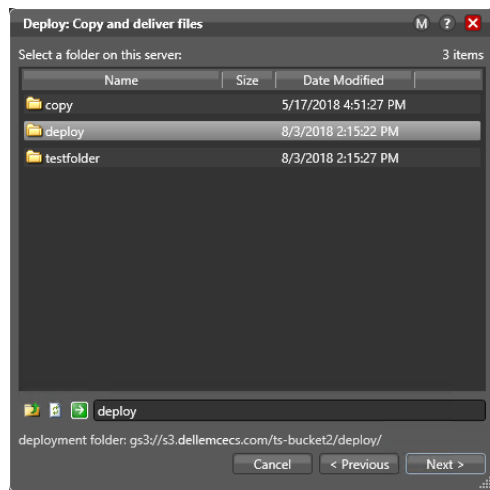
Path. Specifies the root path to your target bucket. Manually enter it or specify it by browsing the buckets on the next panel. (You can not save files to the root directory—you must supply a path.)

Click Next to connect to your ECS. If the system is unavailable or you have mis-configured the Watch action, Vantage displays this error:



Correct the problem and retry.

When Vantage successfully connects to your ECS, you can view and browse your buckets:



Select the target bucket to monitor. Notice that the watch folder path is updated at the bottom of the panel—this path is included automatically in the URL.

Click Next to set up file collision resolution in the situation where you are attempting to deliver a file to a directory where the same file already exists. For details, display the man page—click the M icon in the upper right corner of the panel.

When you're done configuring the Deploy action, click Finish to save your settings and close the inspector.

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