

Vantage Cloud Subscriptions File Migration to S3

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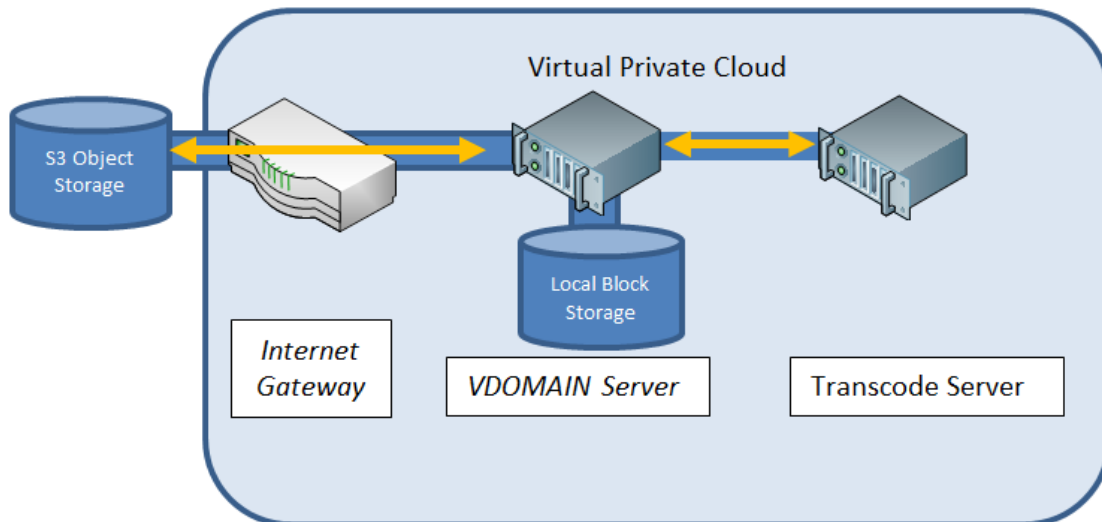
Overview

Internet connectivity to Vantage Cloud Subscriptions is provided by the Vantage Domain Server within Vantage Virtual Domains at AWS. The Transport services for file transfers (Copy and Move actions) are preconfigured to run on the Domain Server.

Vantage Virtual Domains include these components:

- Virtual Private Cloud
- One Domain Server, named VDOMAIN, with a public IP address
- At least one transcode server, all with private IP addresses.
- An Internet Gateway that routes public IP addresses to objects outside of the Virtual Private Cloud

Objects to be processed by Vantage Cloud Subscriptions are staged in S3 Object Storage. From there, input objects must be localized to the Vantage Virtual Domain VDOMAIN Server. One way to do this is to use a Vantage workflow incorporating a Copy or Move action, explained at the end of this note. However, using the Post Producer option in Vantage, the migration of files from S3 to the VDOMAIN Server can be fully automated.

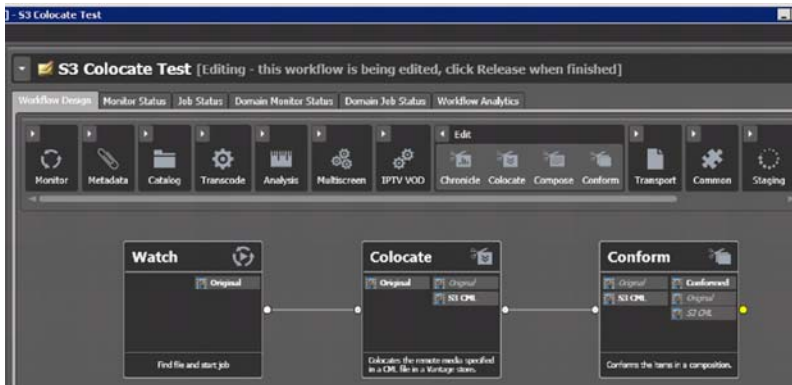


Requirements

The Colocate action and workflow described in this note requires Vantage 6.3 with Post Producer. To run in the cloud, Vantage Cloud Subscriptions is also required.

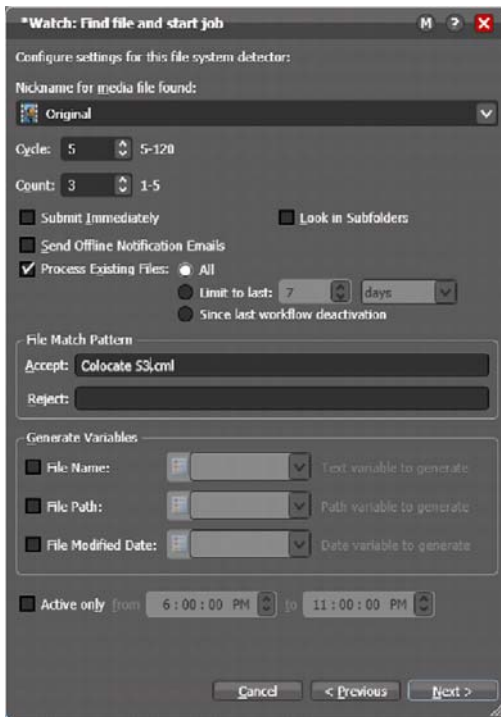
Workflow

The following procedure illustrates how to build a Colocate workflow using Run-On-Rules.



These are the steps required to build the workflow:

- 1. Watch action:** A Watch action will always be configured in Vantage Workflows at AWS to run on the Domain Server. This is true whether it is watching an S3 bucket or a folder on the local file system. In this example, the action is Watching for playlist CML files named Colocate S3.cml.



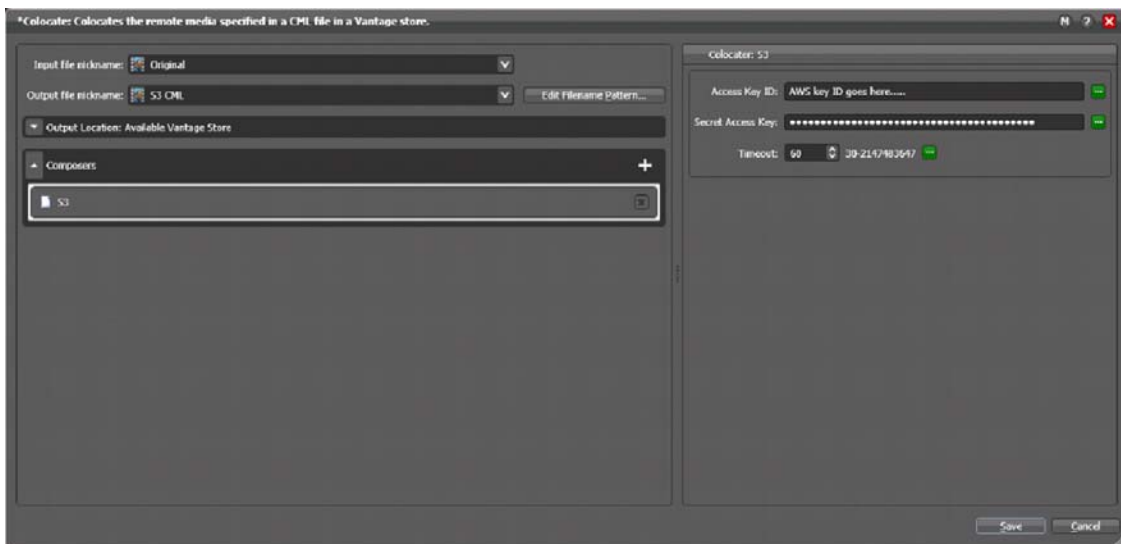
2. CML media references: The CML document includes references to the source content that is stored in S3 bucket locations. S3 is object storage, and therefore there are no randomly accessible blocks to address. Before transcoding can take place, the file must be moved in its entirety from S3 to a block store location. Vantage Virtual Domains provide block store (the D: drive) that is directly attached to the VDOMAIN server.

```
<?xml version="1.0" encoding="utf-8"?>
<Composition name="" version="1.0" created="2014-08-14T12:48:22.5055655-04:00"
xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="0">
    <File location="s3://masters/TMX50.mov" />
  </Source>
  <Source identifier="1">
    <File location="s3://masters/Portuguese-Mono.wav" />
    <Mix source="1" target="1" level="1" phase="0°" />
  </Source>
  <Source identifier="2">
    <File location="s3://masters/English-Mono.wav" />
    <Mix source="1" target="2" level="1" phase="0°" />
  </Source>
  <Source identifier="3">
    <File location="s3://masters/French-mono.wav" />
    <Mix source="1" target="3" level="1" phase="0°" />
  </Source>
  <Source identifier="4">
    <File location="s3://masters/Spanish-Mono.wav" />
    <Mix source="1" target="4" level="1" phase="0°" />
  </Source>
```

3. Vantage Colocate Action: Vantage transcoding actions reference media by using Windows or UNC pathnames. When content is stored in locations that require alternative protocols, such as FTP, HTTP, or S3, it is necessary to migrate the content to a windows accessible location. When CML documents contain file references to S3 locations, Vantage Colocate resolves the external references, localizes the media and updates the CML document with the local file location.

Colocate is configured by specifying these settings:

- a. The output location:** This is the local, block store file system (VDOMAIN D: drive). Specific folders or Vantage stores are valid choices. However, selecting an Available Vantage Store makes the workflow portable between systems.
- b. The source file storage location:** In this case choose S3.
- c. S3 credentials for accessing the store:** These are the AWS Access key and Secret Access Keys that were provided when your account was created.



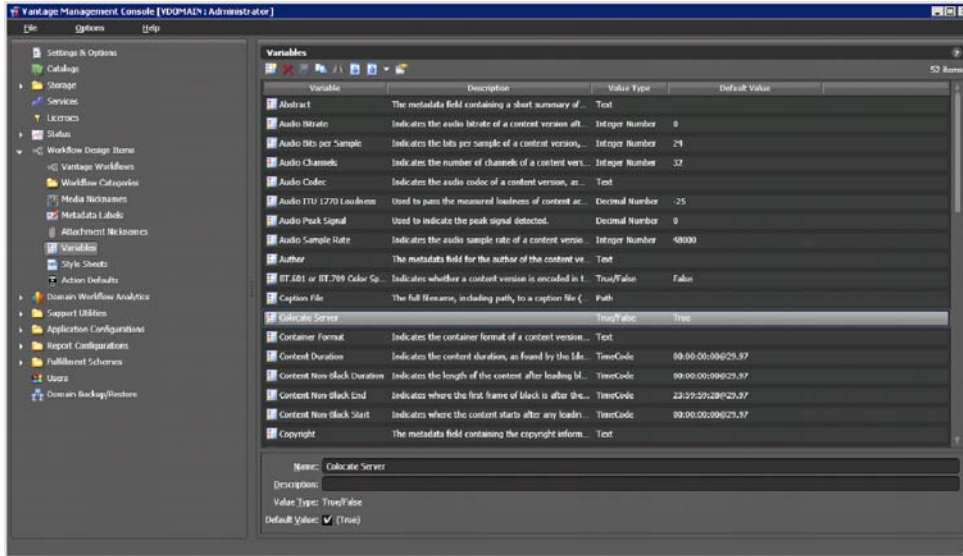
Execution of the Colocate Action results in localization of the media in the Vantage Store, located on local block storage, and a CML file with updated references:

```
<?xml version="1.0" encoding="utf-8"?>
<Composition name="" version="1.0" created="2014-08-14T12:48:22.5055655-04:00"
xmlns="Telestream.Soa.Facility.Playlist">
  <Source identifier="0">
    <File location="//vdomain\Vantage Store\f76b2217-83f1-4a4a-9fdf-0957e4a5dbc8\IMX50.mov" />
  </Source>
  <Source identifier="1">
    <File location="//vdomain\Vantage Store\f76b2217-83f1-4a4a-9fdf-0957e4a5dbc8\Portuguese-Mono.wav" />
    <Mix source="1" target="1" level="1" phase="0" />
  </Source>
  <Source identifier="2">
    <File location="//vdomain\Vantage Store\f76b2217-83f1-4a4a-9fdf-0957e4a5dbc8\English-Mono.wav" />
    <Mix source="1" target="2" level="1" phase="0" />
  </Source>
  <Source identifier="3">
    <File location="//vdomain\Vantage Store\f76b2217-83f1-4a4a-9fdf-0957e4a5dbc8\French-Mono.wav" />
    <Mix source="1" target="3" level="1" phase="0" />
  </Source>
  <Source identifier="4">
    <File location="//vdomain\Vantage Store\f76b2217-83f1-4a4a-9fdf-0957e4a5dbc8\93Spanish-Mono.wav" />
    <Mix source="1" target="4" level="1" phase="0" />
  </Source>
```

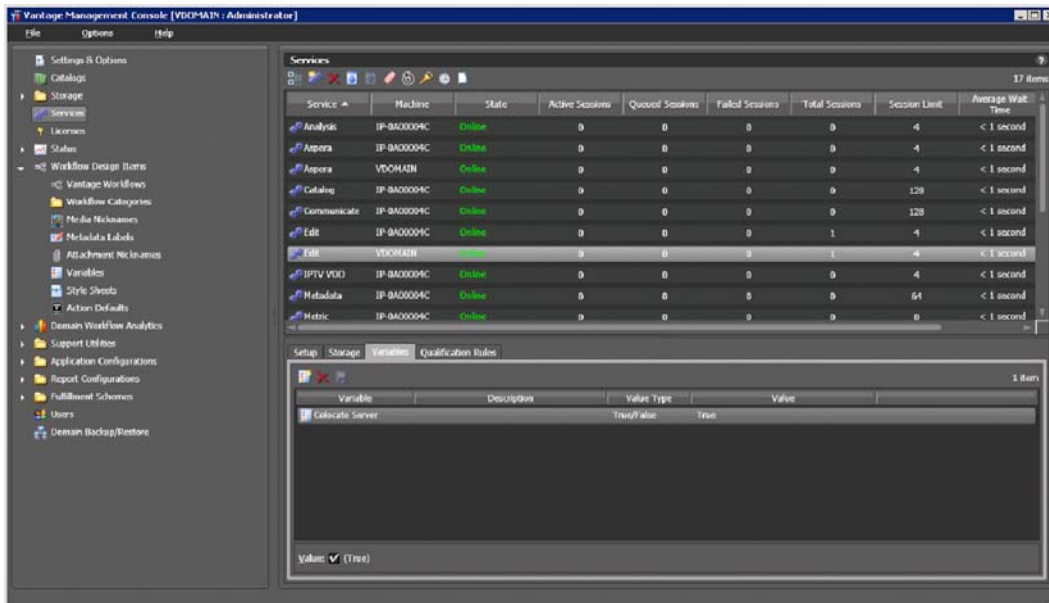
4. Run-On-Rules: Because the Domain Server is the path to the internet and S3 for the Virtual Domain, the Colocate action, must be configured in the workflow to run on the VDOMAIN server. Forcing actions to run on specific nodes is accomplished using Run-On-Rules in the workflow configuration.

Run-On-Rules have three components:

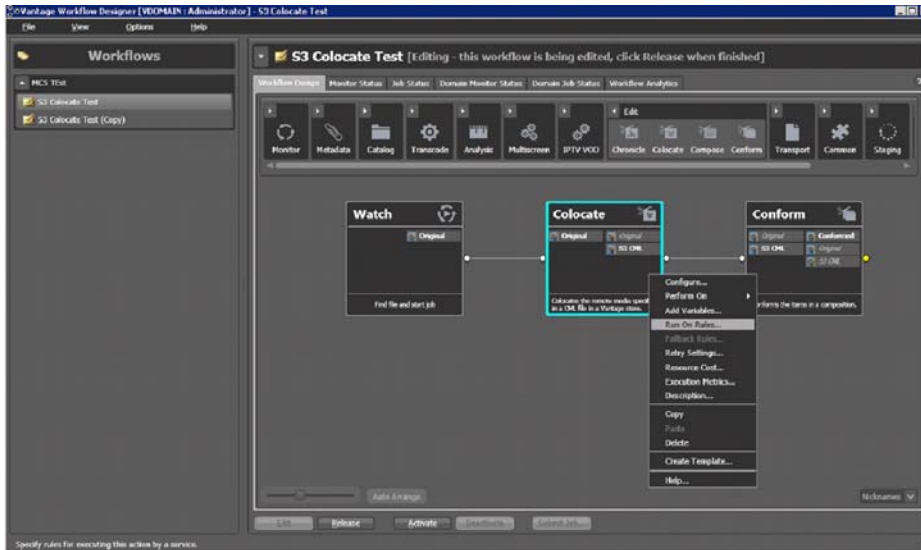
a. A vantage variable: Create or use an existing True/False variable in the Vantage Management Console. In this example, we created one called Colocate Server. The default value is set to TRUE.



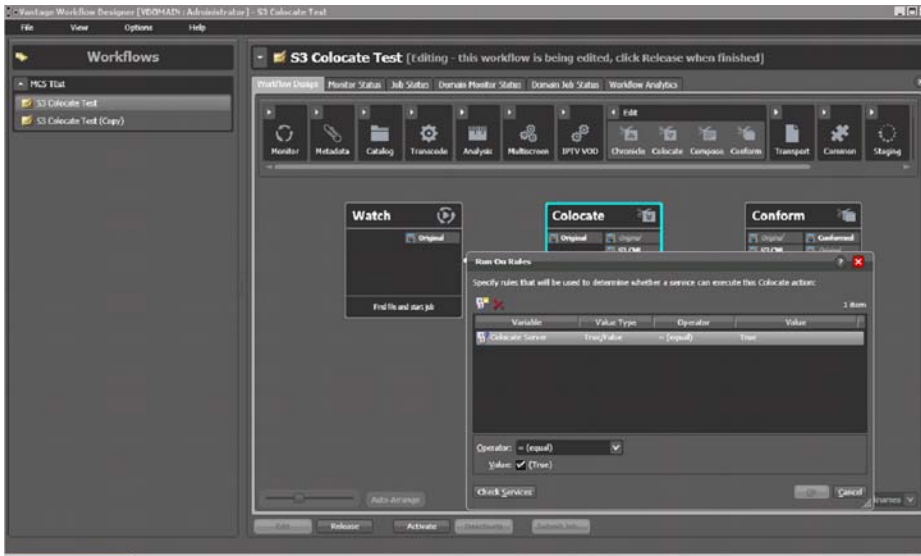
b. Run-On-Rule Service Assignment: The Services are listed in the Vantage Management Console. Each service type is listed next to the server that hosts it. The Colocate Action is part of the Edit Service. Therefore, assign the Colocate Server Variable to the Edit Service so that it runs on the VDOMAIN server.



c. Assign the Run-On-Rule in the workflow: Edit the workflow in the Workflow Designer, right-click the Colocate Action (remember it is part of the EDIT Service) and select Run-On-Rules.



d. Then add the variable to the workflow action and set the default to TRUE.



The Colocate Action will now always run on the VDOMAIN server, and therefore have complete access to the internet gateway and S3 buckets.

Localizing S3 Content

S3 Object storage does not support the random access that is required for transcoding. Therefore, it is necessary to localize the file in its entirety to a block store location for transcoding. Vantage Virtual Domains provide block store (D: drive) that is directly attached to the VDOMAIN server.

Configuring workflows to localize content requires that a Vantage Folder be created that references the S3 location. Use the folder name in the Vantage workflow to Move or Copy content from and to S3 folders.

1. Define a Vantage Folder in the management console that references an S3 bucket.
2. Follow Watch and Receive with a MOVE or COPY action to localize the content.
3. Add Move or Copy actions to the end of workflows where the content destination is S3.

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