



User Guide



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Preface

To obtain product information, technical support, or provide comments on this guide, contact us using our Web site, email, or phone number.

Resource	Contact Information
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Introduction to Vantage

This chapter is intended for those who use Vantage for transcoding and processing digital media and for system administrators who must configure Vantage.

The following topics introduce Vantage, and the Vantage programs that you'll use in the course of processing your media in Vantage workflows:

- [Vantage Overview](#)
- [Accessing Vantage Guides and Online Help](#)
- [Vantage Domain Components](#)
- [Vantage Domain Configurations](#)
- [Vantage Programs and Options](#)
- [Lightspeed Server](#)
- [Capturing Live Video and Tape Feeds](#)
- [Vantage Licenses](#)

Note: Vantage licenses enable specific features and programs in Vantage, including optional transcoding capabilities, Lightspeed server, advanced workflow features and system management.

Vantage licenses allow you to download and install Vantage software at your convenience and purchase only those features that you need. If you need additional features later, you can purchase the licenses you require at any time. Features for which you do not have a license may be disabled, or work only in demo mode. Topics which describe a feature that requires a license indicate that you need a license to use them.

You manage licenses in the Vantage Management Console. You can also add or update licenses directly in Workflow Designer. For a full discussion of licensing in Vantage, see the [Vantage Licenses](#).

Vantage Overview

At the simplest level, Vantage is a collection of customizable software programs that automate media processing via workflows. A Vantage workflow is a collection of actions that you design and configure to process media files in a specific manner.

The actions you can utilize in a workflow are controlled by the Vantage licenses you install. The following table lists some typical media processing objectives and the Vantage licenses that support them (these are not the only licenses you can use in Vantage—for a complete list, contact your Telestream representative).

Workflow Objective (Vantage License)	Description
File-to-file transcoding	Transcoding workflows automate the process of converting a video file from one media format to another. Vantage can open most video files, regardless of the encoding and packaging format, and create one or more new video files using one or more selections from an extensive list of encoder and packaging formats.
Live Capture	Lightspeed Live Capture operates as a standalone capture system and can also extend live encoding capability by providing live capture in a number of high quality mezzanine formats into the Vantage Media Processing Platform.
Commercial processing—local, regional, and national	TrafficManager streamlines commercial and syndicated content handling for TV stations and cable facilities. TrafficManager provides a complete solution for local/regional, and nationally syndicated and commercial media workflows, from ingest, review & approval, transcoding, dub list reconciliation, delivery for ad insertion servers or broadcast servers, and automation system notification.
Adaptive streaming encoding	Transcode Multiscreen includes transcoding software specifically designed for adaptive bit rate encoding using both GPUs and CPUs. It simultaneously produces multiple bit-rate variants of H.264/HEVC (using x264/x265 codecs) video and containers for deployment to HTTP adaptive streaming players from Adobe, Apple, Microsoft, and players compatible with MPEG DASH.
Automated editing and composition of advertisements	Post Producer automates the repetitive editing of assets for distribution, promotion and cross promotion. Post Producer allows you to automatically re-purpose movies and episodic content directly from master format for international and domestic distribution.

Workflow Objective (Vantage License)	Description
IPTV VOD Transcoding	Vantage Transcode IPTV VOD provides IPTV and Cable VOD transcoding with the highest possible quality at the lowest bit rates, reducing transmission costs. Additionally, Vantage provides sophisticated stream control and can automate the entire production process, including ingest, transcoding, packaging, delivery, and notification.
Moving media between devices (Vantage Transcode Pro Connect)	Media transport workflows use Vantage native connections to move media between a wide variety of broadcast servers, edit systems, and other professional video devices. System integration includes HTTP Post and Get, for RESTful API calls in workflows. Using these integrations, Vantage can automate the process of receiving media into, or moving media between, different devices—ensuring the right file format at any of many possible destinations.
Re-timing the running-time of media assets (Tempo)	Tempo is based on the Vantage platform, for re-timing file-based content and intelligently decreasing or increasing the running time of shows and segments.
DPP File Creation (DPP License)	Vantage simplifies the creation of DPP-compliant media for the UK market. Operators enter metadata and mark programme segments. After that, Vantage automatically assembles the timeline with slates, bars and tones in the correct places, and programme segments aligned accurately. Vantage also integrates with common QC systems to perform Harding FPA analysis. Vantage then encodes the output AS-11 file with full, 16-bit video processing and optional GPU acceleration, while simultaneously inserting the metadata.
VOD Producer and VOD Producer DAI	VOD Producer and VOD Producer DAI simplify creation and assembly of DAI-ready CableLabs compliant VOD assets, enabling revenue expansion. Built on the Vantage platform, this system assembles final output from audio, video, graphics, and metadata, and creates content with branding to meet regulatory requirements, plus Nielsen watermarking for viewership measurement.
Media analysis and media-dependent processing (Vantage Analysis)	Media analysis workflows use Vantage features to analyze media, compare the results to configured values, and make decisions about how media should be routed or processed.

Workflow Objective (Vantage License)	Description
Processing camera files	Vantage offers comprehensive monitoring of card readers and shared storage for camera shots. Spanned clips are automatically stitched to reconstruct camera shots, and shots across an entire camera can optionally be stitched or time-aligned for rushes or multi-camera shoots. Panasonic P2 DV5, AVC-Intra, and AVC-Ultra media are supported.
Third-party analysis and specialized media processing (third-party connectors)	Some workflows communicate with third-party products (such as MediaMate Screen or Digimetrics Aurora) to analyze or process media.

With the appropriate licenses, Vantage workflows can incorporate the objectives listed in this table, as well as other workflow design and management features, which include the following:

- *Workflow visualization*—Vantage offers a highly flexible process design interface, with visual components that help you see what the workflow will accomplish.
- *Notifications*—Vantage can send emails or notify external systems when media is available.
- *Intelligent branching*—Vantage workflows can be configured to evaluate variables, metadata, and the results of other workflow tasks, and to execute the appropriate workflow branch for further processing.
- *Workflow monitoring and control*—Vantage programs allow you to view the status of jobs that have been submitted to a workflow, and you can stop, cancel, and restart jobs.
- *Operator control*—Vantage provides tools for enabling operator management. Operators can submit files to workflows, view the results, and submit the results to yet another workflow. Operators can also view the status of workflow jobs and, if granted permission by a Vantage administrator, stop, cancel or restart jobs.
- *Scalability and Redundancy*—Vantage scales to thousands of jobs and dozens of servers in an enterprise environment, to implement high-volume processing.

Vantage also provides many system management features, allowing you to scale a Vantage system to many servers, manage user access, and optimize system performance and reliability. The system management features are described in topics throughout this guide.

Additionally, as your need for features grows, you can easily add (or remove) licenses to activate the services, actions, and other components you need, using the Vantage Management Console or the Vantage Workflow Designer.

Accessing Vantage Guides and Online Help

Vantage documentation consists of various guides, online help in the form of man pages, and application notes.

Installation and Domain Management Guide—You can access the domain management guide from the Vantage Management Console Help menu.

User Guides—Guides are available from the Help menu of each Windows client and Web application.

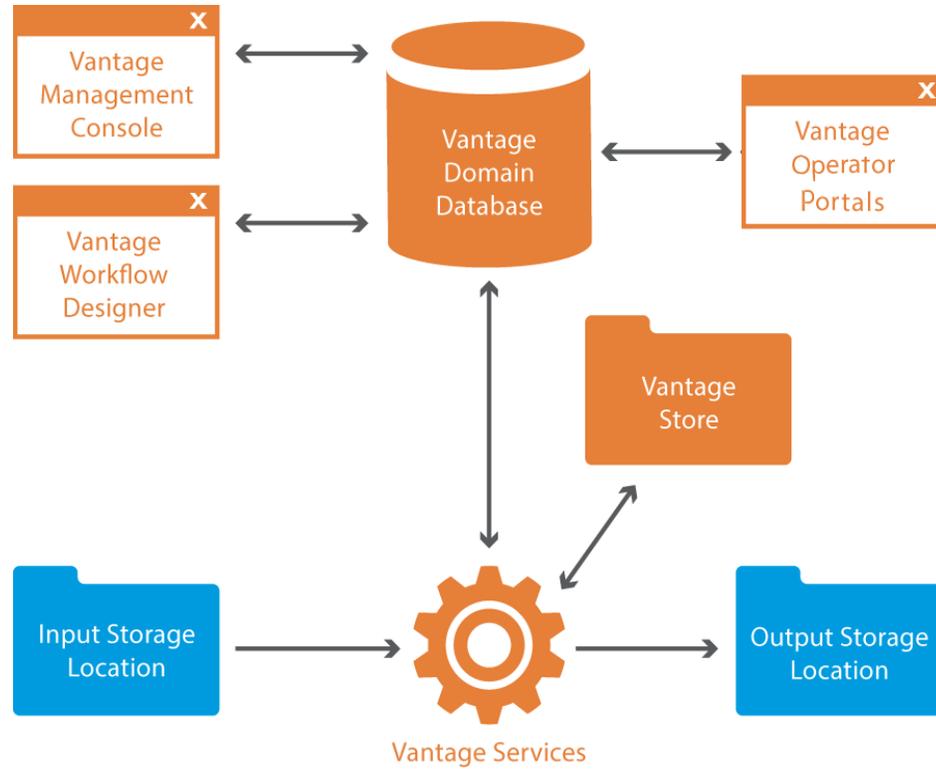
In-program, Context-based Help—In each Windows client and Web application, click the  icon in the upper right-corner to display a context-sensitive topic in the relevant user guide, if available. In Workflow Designer, when an action inspector is open, click the  icon to display details about the panel you're viewing for detailed help. Also hover over user interface controls to display brief tooltips.

Application Notes—Browse the Telestream Web site (at www.telestream.net/telestream-support/vantage/support.htm) for application notes that may apply to your topic of interest.

Vantage Web Library—Click on the Vantage logo at www.telestream.net/telestream-support/vantage/help.htm to display the entire Vantage documentation suite which includes all guides and man pages.

Vantage Domain Components

Each Vantage Domain is a collection of Vantage software components. You can install and use multiple Vantage domains within a business or other organization. For example, you might install a Vantage domain for the sports department and another for the news department. Domains do not interact with each other—each Vantage domain maintains its own database, and automates its own workflows, independently of other Vantage domains.



The work that you want Vantage to perform is defined in a workflow, which is created using the Vantage Workflow Designer program. Each workflow is made up of individual tasks called actions, which specify what task needs to be performed.

A typical workflow contains actions to do these kinds of tasks:

- Monitor folders for new media to ingest and process
- Analyze and transcode input media into new media files
- Assemble a media file from an edit decision list
- Process metadata
- Deliver finished media files and metadata files to specified locations

Once a workflow has been designed, you can activate it, and it will run continuously to process media provided through hot folders, the Vantage SDK, or other submission mechanisms.

For more information on the available actions and workflow design, see the *Vantage User Guide*.

The Vantage domain database is the control center of a Vantage domain. All workflows, user information, job history, and most configuration details for the domain are stored in the Vantage domain database. Also stored in the database are statistics and status information about the workflows processed by the domain and the services fulfilling them. Vantage domain administrators configure Vantage using the Management Console.

Working with the Vantage domain database, Vantage services execute workflow actions in a Vantage domain. Each service executes specific action types. For example, the Transcode Service executes the Flip action, which transcodes an input media file into a new file, based on the encoder and codecs you select.

Vantage workflow actions which access input files or publish output files must have read and write access to these storage locations the input and output storage locations shown in the figure. These locations can be folders that reside on a network server or workstation, a Network-Attached Storage (NAS), or a Storage Area Network (SAN). Or, they may be FTP or HTTP servers, or other media platforms.

A Vantage Store is a storage location designated during Vantage installation for storing temporary files that are created during workflow processing. Temporary files are automatically deleted by Vantage when they are no longer needed; you can control how long temporary files are retained by setting expiration rules for jobs and catalogs.

Vantage Domain Configurations

While Vantage supports many different physical configurations, there are only two types of domains:

- A single node, all-in-one computer domain
- A multiple-computer array, where the Vantage services and Vantage database are distributed among two or more servers.

A single-node all-in-one domain is a Vantage domain in which all the basic Vantage components shown in the figure are installed on a single server. An all-in-one domain is simpler to install and manage, but it has performance limitations which are described in the *Before You Install Vantage* chapter of the *Vantage Domain Management Guide*.

A multiple computer Vantage array (sometimes referred to as a *distributed domain*) is one in which the Vantage components are distributed among multiple servers. For example, you might install the Vantage database on one server, and install all Vantage services on an additional server, and a second Transcode service on the third server. This three-server Vantage domain separates database processing from Vantage service processing, which increases processing capacity for both the Vantage domain database and the Vantage services.

Hosting Vantage services on multiple servers also increases capacity and supports load-balancing and task scheduling, which leads to better throughput.

Vantage Programs and Options

Vantage programs allow you to manage and use the Vantage domain in various ways. The table below lists the Vantage programs according to the type of program and the Vantage management area they serve.

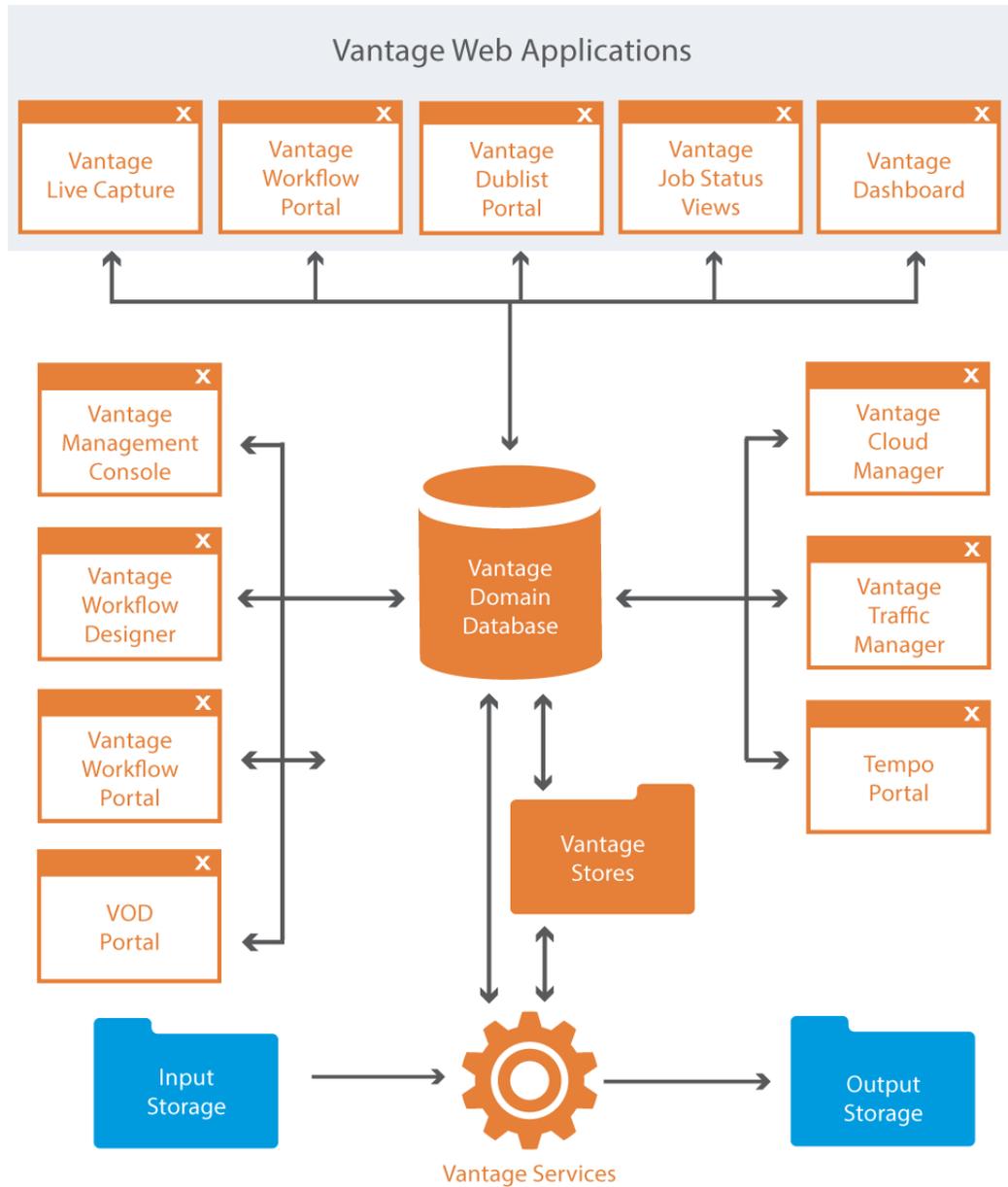
Note: Some Vantage programs are available only with particular Vantage product licenses. To ensure you get the programs you want, contact Telestream sales for the latest bundling and licensing information.

Functional Area	Program Type	
	Client Applications	Web Applications
Workflow Management	Vantage Workflow Designer Vantage Workflow Portal	Vantage Job Status Views Vantage Workflow Portal
Live Capture	Vantage Workflow Designer	Lightspeed Live Capture web application
Transcoding Workflow Management	Vantage Workflow Designer	Vantage Transcode
TrafficManager Dublist Management	Dublist Portal	Dublist Portal
Domain Management	Vantage Management Console	Vantage Dashboard
Cloud Management	Vantage Cloud Manager	
Dynamic Ad Insertion	DAI Portal	
Tempo Asset Re-timing	Tempo Portal	
VOD Producer	VOD Producer Portal	
Post Producer	CML Portal	
DPP	DPP Portal	

From a management point of view, each Vantage program can be classified as a workflow management program or a domain management program. Workflow management programs allow you to design workflows, evaluate and forward the files saved by a job, and track the status of jobs. Domain management programs allow you to configure the Vantage domain, view status and statistics for the domain, and control domain operation.

Each Vantage program can also be classified by application type, which is either as a client program or a Web application. Client programs run on Microsoft Windows servers and workstations. Web applications are hosted by a Microsoft Internet Information Services (IIS) server and can be accessed from any computer with a compatible browser and a network or Internet connection to the IIS server hosting the Web applications.

This figure illustrates how Vantage programs fit into a Vantage domain.



The following topics introduce the Vantage programs and options:

- [Vantage Management Console](#)
- [Vantage Workflow Designer](#)
- [Vantage Workflow Portal](#)
- [Vantage VOD Portal](#)
- [Vantage Tempo Portal](#)
- [Vantage Web Applications](#)
- [Vantage TrafficManager](#)
- [Post Producer and Related Options](#)
- [Vantage Tempo](#)
- [Lightspeed Server](#)
- [Capturing Live Video and Tape Feeds](#)

Vantage Management Console

The Vantage Management Console (VMC) enables domain administrators to configure and manage a Vantage domain, including specifying what features Vantage users can access. The following is a partial list of Vantage features that administrators can control with the Vantage Management Console:

- Vantage catalogs and stores
- Vantage users
- Vantage licenses
- Task scheduling rules
- Vantage services (including email on service failure for all license levels)
- Action and workflow status
- Import and export of Vantage configuration components
- Application configurations, including client windows, web applications, Job Status views, and various portals such as the Workflow, VOD, and Tempo Portals
- Report and workorder configurations
- Dublist and Fulfillment schemes
- Vantage domain settings, backup and restore, and other utilities

The Vantage Management Console also allows you to view a variety of status information, including information about jobs, service status, and catalog contents.

For information about using the Management Console, refer to the [Using the Vantage Management Console](#) chapter in the *Vantage User Guide*.

Vantage Workflow Designer

Vantage Workflow Designer enables you to design and automate workflows to meet your organization's transcoding and workflow automation requirements. With Workflow Designer, you can design workflows that do the following:

- Detect media files and related files that are ready for processing
- Evaluate the contents of media files and set variables that describe their contents
- Create decision trees that execute different branches based on variable values
- Generate email and other messages in response to workflow events
- Incorporate related metadata files or add metadata to the output
- Transcode media files to multi-screen formats, including package formats such as Apple HLS and Adobe HDS
- Transcode media files for use in IPTV/VOD/cable applications
- Generate new media based upon edit decision lists or editorial templates
- Perform comprehensive advertisement processing, from catch server to on-air server
- Perform file operations—save media output files and delete source files
- Combine any or all of the above features in hundreds of possible workflows.

A typical workflow design session requires that you pick the actions you want to execute, configure the sequence and settings of those actions, and then activate the workflow. When you activate the workflow, the Vantage domain database and Vantage services work together to process any source material that is submitted to the workflow. Each time source material is submitted, a Vantage job is started. A job represents a single execution of a workflow. For example, if 10 different media files are submitted to a workflow, 10 new jobs are executed.

The Vantage Workflow Designer also includes tools that allow you to monitor the status of workflows and jobs in the domain.

For detailed information on designing Vantage workflows, see the *Vantage User Guide*.

Open Workflows

An option to Vantage workflow functionality, Open Workflows enhance the processing speed of workflows by enabling most actions to begin processing before the previous action has completed. Specifically, Open Workflows are designed to remove the inherent latency that exists between actions within a workflow. For example, during execution of a Watch action when a new file is discovered, the next action—a Copy action—can begin to duplicate the file as the content is received and not wait for the entire file to be received. By reducing the latency between actions within a workflow, more jobs can be processed in the same period of time, improving domain productivity. See [Vantage Licenses](#) > [Workflow Products](#) in this chapter for license details.

Vantage Cloud Manager

The Vantage Cloud Manager enables domain administrators to configure and manage the cloud-based Vantage domain. The following is a list of key Vantage features that administrators can control with the Vantage Cloud Manager:

- Cloud service provider accounts
- Domain configuration
- Domain status (starting and stopping)
- Vantage Services
- Domain status

Vantage Cloud Manager is a separately purchased application that is not included in the main Vantage installer. For information about using the Vantage Cloud Manager, see the *Vantage Cloud User Guide*. Various options are available.

Vantage VOD Portal

The Video on Demand (VOD) Portal is a Vantage option that streamlines creating media assets. This portal allows specification of VOD-specific metadata, such as rating, V-Chip, and more, and allows trimming/stitching of clips to create finished media. The portal also allows marking of ad insertion points, allowing encoding and processing to support Dynamic Ad Insertion (DAI).

Vantage Tempo Portal

Tempo™ is a complete solution for re-timing file-based content and intelligently decreasing or increasing the running time of shows and segments. Tempo has the ability to re-time the complete asset but allows marking selected segments for inclusion or exclusion from the re-timing process when the overall program is re-timed.

Operator control of Tempo is provided through the Tempo Portal, which allows browsing catalogs and selecting media clips to drag and drop to a Segment List. In the Segment List, clips can be separated into program segments via a mark in/mark out process and configured for re-timing or left untouched. The operator then forwards the program, described in an XML composition file, to a Tempo workflow, which re-times the media accordingly.

Vantage Workflow Portal

The Vantage Workflow Portal, which is implemented both as a Windows client and as a web application, allows operators to manually review and update media and manually submit jobs to workflows. Workflow designers create the workflows, and workflow operators use Workflow Portal to do the following:

- Search catalogs and binders which contain media
- Preview proxy media and create clip sets—setting in and out points for trimming
- Review and edit variable values, metadata labels, and embedded metadata
- Update variable values
- Submit media to workflows for processing
- In TrafficManager, search, review, and submit commercials and content for processing
- Stitch multiple files together

The Workflow Portal's user interface allows administrators to customize it using the Vantage Management Console, which controls the features and resources each operator can access. The desktop version of the Workflow Portal is installed on Windows workstations. A Web version is also provided, with a subset of features.

To process media in Workflow Portal, for most configurations you must also create an ingest workflow to pre-process the media and register it in a Vantage catalog.

For information about creating configurations for the Workflow Portal, see the [Setting up Workflow Portal](#) chapter of the *Vantage Domain Management Guide*. For information about using the Workflow Portal, refer to the *Using Workflow Portal* chapter of the *Vantage User Guide*.

Vantage Web Applications

The Vantage Web applications provide browser access to important Vantage functions. These are the Web Applications:

- [Vantage Workflow Portal Web Application](#)
- [Vantage Dublist Portal Web Application](#)
- [Vantage Job Status Views Web Application](#)
- [Vantage Dashboard Web Application](#)
- [Lightspeed Live Capture Web Portal](#)

Note: Vantage Web applications should be installed on a different server from the Telestream Transcode & Analysis engine. For this reason, Web applications are included only with the array installer and not with the single-node installer.

Vantage Workflow Portal Web Application

Workflow Portal is also implemented as a Web application, which is installed separately from Vantage. The Web version of Workflow Portal works with most configuration types and allows most of the features listed above, except for submitting media from Windows platforms, and stitching files.

The login requirements are the same as for other clients. For information about creating configurations for the Workflow Portal, see the *Vantage Domain Management Guide*, and for details about using portal configurations to perform media processing, see the *Workflow Portal Guide*.

Vantage Dublist Portal Web Application

The Dublist Portal Web Application enables you to display and manage TrafficManager dublists processed by Dublist monitor workflows. Filters allow you to narrow the list of dublists displayed based on various criteria. Dublist Portal also includes a tab for viewing and managing dublist expirations. For more information on using the Dublist Portal, see the *TrafficManager User Guide*.

Vantage Job Status Views Web Application

The Job Status Views Web Application, which is installed separately from Vantage, provides Vantage operators and managers with detailed job status information about jobs in the domain. Using the Vantage Management Console, Vantage administrators can configure custom job status *views*, which define what information an operator sees. When there is a large volume of jobs or when security policies dictate, you might want to create custom views for individual operators or departments.

You can access the Job Status Views at [http://\[server name\]/Vantage/JobStatusViewer/](http://[server name]/Vantage/JobStatusViewer/). The login is the same as for other Vantage applications.

For information about configuring the Vantage Job Status Views, see the [Configuring Job Status Views](#) chapter in the *Vantage Domain Management Guide*, and for information about using Job Status Views, see the *Monitoring Workflows and Managing Jobs* chapter in the *Vantage User Guide*.

Vantage Dashboard Web Application

The Vantage Dashboard Web Application, which is installed separately from Vantage, is designed to help domain administrators track the status and system health for the entire Vantage domain, as opposed to other tools which enable management of domain components.

The Vantage Dashboard pages help you quickly assess the health of the domain and progressively dig into deeper detail as needed. For example, the Summary Status page allows you to quickly see the workflow completion success rate and the error rate on servers in the domain. The information on the Summary Status page can help you determine if it is more appropriate to look for problems in a workflow or in a particular server.

Other Vantage Dashboard pages allow you to view the status of servers, services, and jobs. When troubleshooting, it can be very helpful to determine if problems are system wide or confined to a server, a service, or a particular workflow. Vantage Dashboard provides the Web pages that allow you to quickly assess your domain from any Web client that has connectivity to your domain.

For information on using Vantage Dashboard, see the [Using the Vantage Dashboard Web App](#) chapter in the *Vantage Domain Management Guide*.

Lightspeed Live Capture Web Portal

The Lightspeed Live Capture Web Portal allows control over Lightspeed Live capture channels configured within a Vantage workflow for manual start. Channels not configured for manual start are presented in the portal as status (read-only) views. Using the web application, you can select sources and control starting, pausing, and stopping of live video capture.

Vantage TrafficManager

TrafficManager™ streamlines content handling for TV stations and cable facilities. TrafficManager provides a complete solution for syndicated and commercial media workflows, from ingest, review and approval, transcoding, dub list reconciliation, delivery for ad insertion servers or broadcast servers, and automation system notification.

TrafficManager automates the entire workflow, using rules that you specify for how to find, process, and deliver media. When new assets arrive, TrafficManager will automatically identify them and execute all of the steps necessary to ensure timely availability for on-air, cable or web transmission. This happens without requiring manual labor, ensuring that media is prepared in the fastest possible manner, and without introducing human error.

For national ads, TrafficManager integrates with popular digital media delivery services including Javelin, ExtremeReach, the Comcast ADN (Radiance), and others.

TrafficManager integrates with select third-party playout automation systems to automate notification of incoming content and metadata.

Finally, TrafficManager dublist analysis tools let you quickly see the status of the assets you need. Your traffic and operations staff can see at a glance if any commercials have not yet arrived, narrowing their search to only the assets which need attention.

Vantage Dublist Portal

Dublist Portal is a TrafficManager-licensed program which allows users to manage dublist processing. It allows you to view a list of dublists for recently active Dublist Monitor workflow actions, manage dublist expiration, and test dublists to pre-qualify them for workflows. For more information on using the Dublist Portal, see the *TrafficManager User Guide*.

Post Producer and Related Options

Post Producer™ fully automates production processes by assembling multi-layered video deliverables from content sources and masters. With Post Producer you can construct finished, branded assets to automatically re-purpose media for today's multi-language, multi-platform distribution.

Post Producer and related products and options are ideal for:

- Frame accurate clipping and montage assembly of video sources
- Dynamic assembly of composition visuals from video and graphics sources and creation of titles
- Selecting, mapping and combining audio channels to match output requirements
- Inserting ancillary metadata for closed captions, subtitles, Vchip and dynamic advertising

VOD Producer with Dynamic Ad Insertion

VOD Producer DAI is built on the Vantage platform. It automates the assembly of CableLabs VOD content and provisions it for Dynamic Ad Insertion. The VOD Portal enables operator-driven production, including viewing of clips and marking the ad insertion points. VOD Producer generates the necessary metadata files for Nielsen and Canoe, and encodes the media to support ad insertion during VOD playback.

Vantage DPP Packager

Vantage significantly simplifies the DPP file production process by offering a complete, automated and easy-to-use solution for creating DPP files quickly and effectively. Operators simply enter metadata and mark programme segments. After that, Vantage automatically assembles the timeline with slates, bars and tones in the correct places, and programme segments aligned accurately. Vantage also integrates with common QC systems to perform Harding FPA analysis. Vantage then encodes the output AS-11 file with its award-winning full 16-bit video processing and optional GPU acceleration, while simultaneously inserting the metadata.

Vantage can also automate delivery to the final destination, allowing you to quickly scale your DPP file production with a minimum of manual labor.

Vantage® offers a complete solution to perform these DPP functions:

- Allow data entry of DPP metadata, including automatic validation and administrator-defined data entry rules
- Assemble a DPP time line, generating bars, slates, tones, and aligning programme segments correctly
- Transcode to create a DPP-compatible AS-11 MXF file, including metadata and time code
- Automate delivery to multiple locations

Post Producer Titler Engine

The Vantage Post Producer™ Titler Engine, powered by NewBlueFX®, is an optional, licensed feature designed to automate versioned titling of video assets.

Titler Engine uses templates created in NewBlue's Titler Pro™ Editor, which is available as a Windows and Mac OS program, or as a plug-in for top non-linear editors including Adobe Premiere. Together with these powerful video editing tools, Titler Engine enables high-level titling capabilities, including animation, and scalable and flexible titling applications.

Vantage Tempo

Tempo™ is a complete solution built on the Vantage platform for re-timing file-based content, intelligently decreasing or increasing the running time of shows and segments.

Tempo utilizes new time compression algorithms that deliver superior quality and faster turn-around times because it is designed to leverage new methods of media analysis. It does not throw frames away. Rather, it intelligently interpolates the desired time change over the duration of the content in a way that produces no noticeable visual or audible artifacts.

Tempo has the ability to re-time the complete asset but allows marking selected segments for inclusion or exclusion from the re-timing process when the overall program is re-timed.

Operator control of Tempo is provided through the Tempo Portal, which allows browsing catalogs and selecting media clips to drag and drop to a Segment List. In the Segment List, clips can be separated into program segments via a mark in/mark out process and configured for re-timing or left untouched. The operator then forwards the program, described in an XML composition file, to a Tempo workflow, which re-times the media accordingly.

Lightspeed Server

The Telestream® Lightspeed Server can serve as the hardware platform for a Vantage domain or be added to any Vantage domain to accelerate video processing and x264 transcoding. Lightspeed Server accelerates processing with GPUs and multi-core CPUs to provide the best image quality in the least amount of time. Housed in an efficient 1 rack-unit server, Lightspeed Server reduces rack space, power and cooling requirements while meeting increased output capacity needs.

Lightspeed Server accelerates compute-intensive image processing in Vantage workflows, including scaling, deinterlacing, frame rate conversion, motion vector calculation, and other tasks that require computation and analysis to modify or create new video frames. Faster video preprocessing improves the output quality of all video output formats.

There are several Lightspeed Server models, each pre-configured to your order. You can order Lightspeed configured as an all-in-one single-node server containing a complete Vantage system and licenses, ready to run. You can also order multiple Lightspeed Servers with various Vantage components and licenses installed, ready to network together to create a Vantage array.

For more information about the Lightspeed Server, see [Lightspeed Server](#) on the Telestream Web site.

Lightspeed Live Stream

Lightspeed Live Stream delivers enterprise-class live streaming for media and entertainment companies, corporations, government agencies and educational facilities. Lightspeed Live Stream provides efficient and superior quality adaptive bit rate encoding for SD, HD and UHD sources into AVC and HEVC. This integrated hardware and software appliance combines multiple CPU and GPU cores as well as targeted ASIC CODEC acceleration to deliver flexible and efficient encoding performance. Input support is available for SDI as well as IP sources, offering future-proof operation as delivery mechanisms change. Output can be delivered via RTMP or as HTTP Live Streaming (HLS) and MPEG DASH packages.

Lightspeed™ Live Stream can be deployed as a stand-alone solution for live, multiscreen services or combined with the Vantage Media Processing Platform via the optional Lightspeed Live Capture product.

Capturing Live Video and Tape Feeds

Telestream offers the latest and fastest in live capture products for media and entertainment companies, corporations, government and education.

Lightspeed Live Capture

Lightspeed Live Capture offers a real-time, enterprise-class video capture system to answer the increased demand for news, sports, and special event broadcasters to simultaneously push live programs over the Internet.

Lightspeed Live Capture independently records multiple channels of SD, HD or a single UHD channel. By integrating parallel file-based open workflows in Telestream's Vantage platform together with the combined CPU/GPU power of the Lightspeed Live server and applications, the fastest possible delivery of all assets is realized.

Lightspeed Live Capture can receive content via four 3G baseband SDI (1080p/60) channels or one 4K UHD channel via four SDI ports. Live Capture can supply a number of high quality mezzanine formats to Vantage, allowing simultaneous use of the full range of video manipulation that the Vantage Media Processing Platform offers.

Lightspeed Tape Capture

Lightspeed Tape Capture, a feature of Lightspeed Live Capture, supports tape log and capture functionality via 4 Sony standard RS422 machine interface ports, 4 SD/HD/UHD SDI inputs, and an HTML 5 browser client added to Vantage Web Apps. The client allows logging multiple tapes, marking clips to extract from tape, and capturing clips from tapes into output media files using a selectable container/codec. A Tape action added to Vantage enables Vantage workflows to fully take advantage of the tape interface.

Tape Capture supports metadata labels and variables, includes full VTR transport controls with keyboard shortcuts, and provides audio meters with 8 selectable stereo pairs. User accounts provide password protection to prevent unauthorized application access.

Pipeline

Using a Telestream Pipeline encoder as part of your Vantage system, Vantage can ingest live or tape feeds into Vantage workflows. Combining Pipeline's baseband capture with a Vantage system, you can create high-quality real-time or near real-time output in any format supported by Vantage.

For example, you can simultaneously create high-res files for storage while creating a low-res proxy, or create any number of additional file formats in real-time or near real-time. Transcoding occurs simultaneously while ingesting the captured media, ensuring the fastest possible turnaround time for media processing. Pipeline also preserves important metadata, such as ancillary data, throughout your transcoding workflow. Pipeline encoder channels allows for a high degree of scalability and flexibility.

For more information about utilizing Pipeline in Vantage workflow see [Using Vantage Publish within Pipeline Control](#) on the Telestream Web site.

Vantage Licenses

Vantage licenses enable specific Vantage features or feature sets. All Vantage software is available on the Telestream web site. Vantage allows you to download and install Vantage software in demo mode without licenses. At your convenience you can purchase licenses and add them to Vantage for only those products you need. If you need additional products later, you can purchase licenses for additional options.

Note: Some Vantage programs and features are available only with particular Vantage product licenses. To ensure you get the features you want, contact Telestream sales for the latest bundling and licensing information.

Product licenses do not include maintenance and support, which must be ordered separately.

The following topics introduce the available licenses (see the Telestream web site for the latest licensing information):

- [Transcoding Products](#)
- [Transcoding Product Options](#)
- [Workflow Products](#)
- [Workflow Third Party Connectors](#)
- [Vantage System Management Products](#)
- [Vantage Post Producer](#)
- [VOD Producer Dynamic Ad Insertion \(DAI\)](#)
- [VOD Portal](#)
- [Tempo Content Re-Timing Software](#)
- [Lightspeed Servers](#)
- [Lightspeed Options and Bundles](#)
- [Lightspeed Live Capture](#)

Transcoding Products

The following are the transcoding license configurations:

- *Vantage Transcode*—Includes Vantage Workflow Designer, SD & HD New Media, Edit, VOD transcoding format support, FTP/network folder workflow support, and enhanced video processing. GPU acceleration is available for this product when running on a Lightspeed Server. This is a software only, single server license.
- *Vantage Transcode Pro*—Includes Vantage Workflow Designer, SD & HD New Media, Edit, VOD, Broadcast Server, IPTV and MXF transcoding format support, FTP/network folder workflow support, and enhanced video processing. GPU acceleration is

available for this product when running on a Lightspeed Server. This is a software only, single server license.

- *Vantage Transcode Connect*—Includes Vantage Workflow Designer, SD and HD New Media, Edit, Populate plug-in, Web Services Notify, and VOD Transcoding Format support. Provides broadcast server monitoring, XML metadata transformation and delivery, and Web Service notification. Also includes Amazon S3 File System support. GPU acceleration is available for this product when running on a Lightspeed Server. This is a software only, single server license.
- *Vantage Transcode Pro Connect*—Includes Vantage Workflow Designer, SD and HD New Media, Edit, Populate plug-in, Web Services Notify, VOD, Broadcast Server, IPTV and MXF transcoding format support. Includes broadcast server monitoring and delivery, Avid Send to Playback and Interplay delivery, AAF for MediaComposer and Interplay delivery via TransferEngine, XML metadata transformation and delivery, and Web Service notification. Includes enhanced video processing. Also includes Amazon S3 File System support. GPU acceleration is available for this product when running on a Lightspeed Server. This is a software only, single server license.
- *Vantage Generic Catch Monitor*—The Generic Catch Monitor for Vantage Transcode Pro and Transcode Pro Connect receives news clips from media delivery services, such as Extreme Reach Pathfire delivery service and transcodes to specified broadcast server or news system, and processes the XML sidecar into Vantage.
 - Requires Vantage Transcode Pro or Transcode Pro Connect
 - Automates ingest of content from media delivery system
 - Associated XML metadata is processed through Vantage
 - Files and metadata are delivered directly to on-air servers or newsroom production systems
- *Vantage Transcode IPTV VOD*— IPTV and cable VOD transcoding for HEVC, H.264, MPEG-2 and MPEG-1 Transport Stream files. Includes Manzanita Systems multiplexing and x265 HEVC and x264 H.264 encoding. Also includes Vantage Workflow Designer, enhanced video processing, and FTP/network folder workflow support. GPU acceleration is available for this product when running on a Lightspeed Server. This is a software only, single server license.
- *Vantage Transcode Multiscreen*—Multiscreen transcoding for Apple HLS, Adobe Dynamic Streaming, Microsoft Smooth Streaming, and MPEG DASH. Includes x265 HEVC and x264 H.264 encoding technologies, adaptive bit rate packaging, encryption for DRM and full workflow automation. Also includes Vantage Workflow Designer, enhanced video processing, TAR creation, FTP/network folder workflow support. This is a software only, single server license.

For information on the encoders and packagers provided with each license, refer to the Telestream Web site: <http://www.telestream.net/telestream-support/vantage/support.htm>.

Transcoding Product Options

Transcode options extend Vantage transcoding capabilities:

- *Multiscreen ABR Optimize*—Enables adaptive bitrate package optimization for one Vantage Multiscreen node (Multiscreen sold separately). Includes SSIMplus by SSIMWave to intelligently construct adaptive-bitrate (ABR) packages to set and maintain a guaranteed quality of experience (QoE). The ABR option reduces delivery bandwidth and distribution cost for service providers and content creators while ensuring a high level of perceived quality. Each license for ABR Optimize allows a server to run concurrent actions up to the Multiscreen service session limit, comparing reference video to up to 12 Multiscreen encoded variants. Licenses may float across available servers. To enable ABR optimization for multiple Transcode nodes, one ABR Optimize option must be purchased for each node. Does not include first year's Annual Maintenance and Support, which must be ordered at time of purchase.
- *Avid Interplay Option*—Enables delivery of files and metadata into Avid Interplay using Vantage Transcode Pro Connect. Enables AAF/MXF media encoding, metadata insertion, and delivery via Avid TransferEngine and Avid Interplay Web Services. Metadata insertion includes ability to add timeline locators and descriptive metadata into Interplay. Also includes additional Avid Web Services features for updating existing metadata and adding multi-resolution encoded versions to existing assets. This option is available for Vantage Transcode Pro Connect only. A Transcode Pro Connect license is required. Does not include first year's Annual Maintenance and Support, which must be ordered at time of purchase. Please include list price when calculating maintenance and support.
- *Cinnafilm Tachyon and Cinnafilm Dark Energy Options*—Tachyon® Video Processing Library (VPL) and Dark Energy from Cinnafilm® are available as separate or combined optional add-ons to Telestream Vantage Transcode and Transcode Pro. For professionals who deal in mixed standards and formats, the Tachyon option provides Vantage media workflows access to high-quality format and standards conversions tools. Tachyon and Dark Energy require Telestream K20 or better Lightspeed servers running Vantage. Dark Energy® can be used for removing unwanted noise/film grain, and for creating image upscaling and down-sampling. Down-samples are alias-free and up-res'd images are scaled with heavy consideration to the image texture at the new raster size.
- *Comprimato JPEG2000*—Enables GPU encoding and decoding of JPEG2000 video files. Available for the Transcode Pro option only, and requires a Lightspeed K20 server or better, both purchased separately.
- *Dolby E Decode Option for Vantage Transcoding*—Decodes Dolby E.
- *GraphicsFactory Upgrade*—Upgrade that can be added to any Vantage Transcode. Includes engine, template creator and submit tool.
- *GraphicsFactory Template Creator*—Provides node-locked seat of the Graphics Factory Template Creator, which can be run on a separate computer. Does not have to be run on a Vantage server.

- *Vantage Camera Ingest Option*—Offers significant time savings for post-production and news users by enabling hands-free batch ingest, processing, time-alignment, and stitching of camera media. Camera ingest software automates and simplifies camera ingest, transcoding and importing of shots in an editing system, freeing editors to focus on editing, instead of manually finding, importing and stitching clips.
- *Dublist Portal*—Dublist Portal for Vantage is a software option that provides the ability for Vantage users to monitor for incoming content, and compare that against a *Dublist*, which is a CSV file that includes media information. The Dublist Portal shows found and missing content and makes it easy for operators to identify missing files. Requires Vantage Transcode Pro or Transcode Pro Connect.
- *Nielsen Watermarking Option*—Allows insertion of Nielsen NAES2 and Nielsen Watermarking audio watermarks for measurement of D4 or D7 ratings for VOD content and also for commercial monitoring with Nielsen’s Sigma and KeepingTrac services. A single license allows up to four concurrent watermarking jobs to execute simultaneously. Requires use of the Vantage SDK or the Workflow Portal and Vantage Analysis; please see the Nielsen Application Note for more information.
- *Timed Text Flip*—Timed Text Flip is an optional module that can be accessed through the Vantage Workflow Designer. The option offers an automated subtitle and captioning service that runs on the Vantage Media Processing Platform, providing an interface to read, write, and adjust subtitle and caption data.

Supports the import of data from multiple file types including EBU-STL, SRT, SCC, MCC, TTML (DFXP / SMPTE 2052), WebVTT, Lambda CAP, PAC, and source video files containing CEA-608/708 caption data. Supports the re-timing and frame rate conversion of caption and subtitle files with starting timecode, re-time rate percent, and timecode offset parameters to match source media file or transcode workflow.

Exports from Timed Text Flip include TV and Internet caption and subtitle formats: SCC, MCC, SRT, Subtitle Overlay, TTML (DFXP / SMPTE 2052), WebVTT, and Same as Source outputs embeds CEA-608/708 caption data into video files. In addition, the Subtitle Overlay function generates graphics for burn-in subtitles in SD, HD, UHD, 4K, and custom resolutions. Subtitle Overlay output parameters include font style selector, text color, background color/opacity, text outline color/thickness. Also shows safe title margins. Timed Text Flip workflows require a transcoder to burn-in the subtitle graphics into a deliverable media file.

Workflow Products

The workflow licenses enable various features specific to automating media workflows:

- *Vantage Analysis*—Includes analysis for curtains, letterboxing, Telecine, black detection, slate/spot detection, macroblocking, loudness measurement with dialog detection and gating controls for compliance with CALM Act, ATSC A/85, BS-1770-3 and EBU R128, and more. Includes PSNR measurement for comparing two files. This is a software only, single server license.
- *Vantage Analysis Pro*—Includes all capabilities of Vantage Analysis, with additional capabilities for Dolby E audio detection and analysis, compliance checking, PDF reporting, and integration with MedialInfo for extended media properties. This is a software only, single server license.
- *Upgrade from Analysis to Analysis Pro*—Upgrades from Vantage Analysis to Vantage Analysis Pro. This is a single license upgrade.
- *Vantage Open Workflows*—The Open Workflows license enables workflows and actions to operate in open mode, which allows open-eligible actions to operate concurrently rather than serially. This feature greatly improves workflow processing speed and efficiency.

The license must be installed before the feature can be enabled. Open Workflows are licensed on a per server basis. For example, if you have a 5 node array and 3 license seats of Open Workflows, then 3 out of the 5 servers will be Open-capable.

If a user would like to release an Open Workflows license seat from a server in order to make it available to a different server, the user may put all the services on a machine that has an Open Workflows license seat in and out of maintenance mode. This will cause the license seat to be acquired by a different server that previously did not have an Open Workflows license seat.

Lightspeed Live Servers include Open Workflows at no extra charge. However, Lightspeed Live servers are limited to a small subset of the Vantage services.

- *Vantage Workflow Portal*—The Vantage Workflow Portal allows operators to browse assets in the Vantage catalog, construct EDLs, enter metadata, and submit jobs to Vantage workflows. Each Vantage Workflow Portal license allows one instance of client access from any client machine; the total number of licenses in the Vantage database determines how many clients can connect simultaneously. This is a one client access floating license. **Note:** This product requires either a Metadata, Transcode Connect, or Transcode Pro Connect license.
- *Vantage Metadata Conversion*—Enables ability to transform XML files, create or populate metadata labels, and perform Web Services notification. Includes: Web Services notification, Populate, Transform, Gather and Archive actions. This is a software only, per server license.

- *Vantage TrafficManager™ for Broadcast*—Controls and automates the ingest, management and production of commercials and content. Includes the following:
 - Catch server integrations with DG, Javelin, Extreme Reach, Hula MX and more
 - Customizable web page for local and regional submissions via web upload
 - Automated dub list processing to trigger commercial processing
 - Vantage Analysis for smart transcoding and ITU 1770.3 loudness correction
 - Vantage Workflow Portal for Windows client and web-based commercial and syndicated content inventory management (5 users included)
 - Vantage Transcode Pro Connect for transcoding & delivery to broadcast, edit, and web formats.

This is a software only, single server license. Requires 3 days on-site installation, purchased separately. N+1 Redundancy may be added with Vantage Array. Additional user accounts may be added with Vantage Workflow Portal.

Fully compatible and extensible with Vantage transcoding, workflow, partner integrations and system management products. GPU acceleration is available for this product when running on a Lightspeed Server.

- *Vantage TrafficManager™ for Cable/IPTV*—Controls and automates the ingest, management and production of commercials and content. Includes the following:
 - National catch server integrations with DG, Javelin, Extreme Reach, Hula MX and more
 - Customizable web page for local and regional submissions via web upload
 - Automated dub list processing to trigger commercial processing
 - Vantage Analysis for smart transcoding and ITU 1770.3 loudness correction
 - Vantage Workflow Portal for Windows client and web-based commercial and syndicated content inventory management (5 users included)
 - Vantage Transcode IPTV VOD for transcoding & delivery to IPTV and cable ad insertion
 - Vantage Transcode Connect for transcoding to web, edit and mobile formats, and XML transformations

Requires 3 days on-site installation, purchased separately. N+1 Redundancy may be added with Vantage Array. Additional user accounts may be added with Vantage Workflow Portal. Fully compatible and extendable with all Vantage transcoding, workflow, partner integrations and system management products. GPU acceleration is available for this product when running on a Lightspeed Server. This is a software only single server license.

- *Post Producer™*—Allows automated editing and assembly of finished content from one or more input media files. Includes media trimming, stitching, overlays, audio mixing and metadata insertion for a wide variety of formats (please see Post Producer data sheet for a full list of supported formats and features). Includes Conform action support for CML message submission and Compose action support for TSEDL and AN2 inputs. Includes Vantage Workflow Designer, and FTP/network folder workflow support. May be combined with any Transcode product, sold separately. GPU acceleration is available for this product when running on a Lightspeed Server. This is a software only, single server license.
- *Post Producer™ Titler Engine*, powered by NewBlueFX®, is an optional, licensed feature designed to automate versioned titling of video assets.

Workflow Third Party Connectors

Connectors allow Vantage to submit and monitor jobs to third party systems. Except where noted, a Connector license allows four (4) concurrent jobs on the partner system. Additional Connector licenses may be purchased to allow additional jobs.

- *Vantage Agility ECS Connector*—Allows a Vantage server or array to submit jobs to an Agility ECS. License allows connection to one ECS.
- *Vantage Aspera faspex™ Delivery Connector*—Provides automated delivery of media and associated files directly to Aspera faspex™ Servers. Aspera fasp™ transport technology can achieve delivery speeds many times faster than standard FTP and HTTP to an address list or an Aspera drop box. Does not include Aspera Faspex server. This is a software-only license that allows up to four concurrent file transfers.
- *Vantage Aspera Enterprise Server Integration*—Enables Vantage to interactively browse, upload, and download media content with any Aspera server endpoint, whether that is a fully featured Enterprise Server system or a Point-to-Point node. Allows for automated high-speed transfer of files processed into and out of any Vantage workflow. Does not include Aspera Enterprise Server software.
- *Avid Interplay Option*—See *Avid Interplay Option* in [Transcoding Product Options](#).
- *Vantage Minnetonka AudioTools Connector*—The Vantage AudioTools Connector integrates within Vantage's file-based framework using AudioTools Server to support fundamental loudness control workflows and custom, predefined workflows for broadcasters. AudioTools Server (ATS) is a highly configurable and modular system and the Connector allows Vantage to drive audio processing workflows and jobs directly from the Vantage workflow designer.
- *Vantage Digimetrics Aurora Connector*—Allows integration of Digimetrics Aurora software with Vantage. This connector allows up to four (4) concurrent QC sessions to be triggered by, and monitored within Vantage. Does not include Digimetrics Aurora. **Note:** Aurora should not be run on the same machine as a Vantage Transcode or Analysis product. The Vantage Aurora Connector service must be installed on the Aurora machine.

- *Vantage Baton Connector*—Allows integration of Interra Baton software with Vantage. This connector allows up to four (4) concurrent QC sessions to be triggered and monitored by Vantage. **Note:** Baton cannot be run on the same machine as a Vantage Transcode or Analysis product. The Vantage Baton Connector service must be installed on the Baton machine. Does not include Baton software.
- *Vantage Cerify Connector*: Allows integration of Tektronix Cerify QC software with Vantage. This connector allows up to four (4) concurrent QC sessions to be triggered and monitored by Vantage. The Cerify software cannot be run on the same machine as a Vantage Transcode or Analysis product. The Vantage Cerify Connector service must be installed on the server running Cerify. This option does not include the Cerify software.
- *Vantage Connector for Civolution NexGuard Watermarking*—Enables Civolution Nexguard Pre-release Watermark Embedder capability within Transcode or Transcode Pro, allowing four (4) concurrent sessions. This license does not include the Civolution NexGuard license which must be purchased directly from Civolution. Requires Vantage Transcode or Transcode Pro.
- *Vantage Connector for Civolution NexGuard Manager Server*—Enables Vantage connection to Civolution NexGuard Manager Server, allowing updates of Civolution database as watermarking is performed. Only one license is required per Array. Requires Civolution NexGuard Manager Server, available from Civolution directly.
- *Vantage Dolby DP600 Connector*—Allows integration between Vantage and a Dolby DP600. One connector allows up to four (4) concurrent work sessions (jobs) on the DP600. **Note:** Does not include Dolby DP600.
- *Vantage Emotion Connector*—Allows integration of Emotion Systems software with Vantage. This connector allows up to four (4) concurrent Emotion sessions to be triggered and monitored by Vantage. **Note:** The Emotion Systems software cannot be run on the same machine as a Vantage Transcode or Analysis product. The Vantage Emotion Systems Connector service must be installed on the server running Emotion.
- *Vantage FileCatalyst Integration*—Allows integration of FileCatalyst for delivering files to FileCatalyst servers. This connector allows up to four (4) concurrent file transfers to be performed by Vantage. Does not include FileCatalyst server.
- *Screen Open Subtitle Graphics Generation*—Open subtitling solution where the subtitle text is permanently burnt-in and visible in the video portion of the media. Only available within Transcode or Transcode Pro. **Note:** This option requires Vantage Transcode or Transcode Pro to burn in the subtitles.

- *Pitchblue Monitor for Vantage*—The Pitchblue Monitor for Vantage Transcode Pro and Transcode Pro Connect receives content from Pitchblue media delivery service and transcodes to a specified broadcast server, and processes available XML sidcar metadata into Vantage.
 - Requires Vantage Transcode Pro Connect
 - Automates ingest of content from Pitchblue media delivery system
 - Some associated metadata can be processed through Vantage
 - Files and metadata are delivered directly to on-air servers
- *Vantage Pulsar Connector*—Allows integration of Venera Pulsar software with Vantage. This connector allows up to four (4) concurrent QC sessions to be triggered and monitored by Vantage. **Note:** Pulsar cannot be run on the same machine as a Vantage Transcode or Analysis product. The Vantage Pulsar Connector service must be installed on the Pulsar machine. Does not include Pulsar software.
- *Nexidia QC Integration*—A Vantage Nexidia connector and action provide access to Nexidia QC functionality within Vantage workflows. Nexidia QC provides automated closed caption and video description verification, closed caption alignment, and language identification for broadcast and IP workflows.
- *Vantage Screen MediaMate Connector*—Allows Vantage to connect to external MediaMate systems. Allows up to four (4) concurrent jobs to be performed in MediaMate, managed by Vantage. **Note:** This option does not include Screen MediaMate. Use of this Connector requires the purchase and installation of custom MediaMate models, and a dongle from Screen. These models are purchased from and installed by Screen.
- *Vantage Signiant Integration*—Allows integration of Signiant for delivering files to Signiant Content Transfer Engine and Media Exchange server locations. This connector allows up to four (4) concurrent file transfers to be performed by Vantage. **Note:** This option does not include Signiant Content Transfer Engine or Media Exchange server software.
- *Vantage Social Media Connector*—Adds the ability to post Vantage workflow outputs directly to YouTube, Vimeo, LinkedIn, and Twitter, either automatically or operator-controlled through the Vantage Workflow Portal.
- *Vantage VidChecker Connector*—Allows integration of Vidchecker software with Vantage. **Note:** Vidchecker cannot be run on the same machine as a Vantage Transcode or Analysis product. The Vantage Vidchecker Connector service must be installed on the Vidchecker machine. This connector allows up to four (4) concurrent QC sessions to be triggered and monitored by Vantage. Does not include VidChecker software.

Vantage System Management Products

The Vantage System Management license allows you to install Vantage services on multiple Windows or Telestream Lightspeed servers, increasing the capacity and reliability of your Vantage domain. Vantage array features include the following:

- *Redundancy*—Multiple Vantage array servers can host the same service, increasing the processing capacity of the Vantage domain.
- *Session-based load balancing*—When a Vantage service is enabled on multiple Vantage array servers, individual workflow actions can be executed by any Vantage array server that is configured for the supporting service. Action execution is scheduled based on CPU availability and priority.
- *Priority acceleration for transcoding actions*—Vantage servers, both single node and arrays, can pause lower priority actions hosted on the same service, execute the higher priority action, and then resume the lower priority action.
- *N+1 failover protection*—Vantage array servers communicate with each other and can redistribute the workload if a Vantage array server fails. If a job fails to complete due to a Vantage array server failure, another Vantage array server restarts the job.
- *Support for mirrored SQL Standard and SQL Enterprise with Clustering databases*—provides redundancy and failover protection for the Vantage domain database.

If the current domain is an all-in-one domain, the activation of a Vantage Array license changes the Vantage server to a Vantage array server. You can then create a distributed domain by adding Vantage array servers. In a Vantage array, every Vantage server is a Vantage array server and requires the Vantage Array license.

Additional System Management options to the Vantage Array license are:

- *Advanced Task Scheduling*—Adds advanced task scheduling to Vantage, including the new Task Based load balancing and the legacy Cost Based load balancing. Increases overall system throughput by optimizing server usage for all Actions across all services in a Vantage array while Cost Based load balancing provides optimization of Actions only across like services. Task Based load balancing is the new recommended load balancing methodology. Array is sold separately.
- *Vantage Reporting & Analytics*—Enables CSV reporting and workflow analytics in Vantage. Includes Populate and Web Services Notify. This is a software only, per array license (entire array).
- *Vantage System Dashboard*—Web dashboard enables remote visibility into overall system health and status for administrators, and allows remote maintenance of the Vantage Array. This is a software only license with options for per node or unlimited server licensing.

Vantage Post Producer

Vantage Post Producer™ allows automated editing and assembly of finished content from one or more input media files. Includes media trimming, stitching, overlays, audio mixing and metadata insertion for a wide variety of formats (please see Post Producer data sheet for a full list of supported formats and features). Includes Conform action support for CML message submission and Compose action support for TSEDL and AN2 inputs. Includes Vantage Workflow Designer, and FTP/network folder workflow support. May be combined with any Transcode product, sold separately. GPU Acceleration is available for this product when running on a Lightspeed Server.

Titler Engine Option for Post Producer

The Titler Engine option for Vantage Post Producer is a software installer intended for installation on one or more nodes of Vantage Post Producer. This option provides a means for creating rich, animated titles using the NewBlue Titler Creator tool (not included) to create templates that can be processed by Post Producer to create automated variations using a workorder and a Post Producer template.

The Titler Engine requires Post Producer and runs on Windows Server 2012 on Lightspeed servers. This option is sold per-node, it can run on one or more nodes of Post Producer.

VOD Producer

Automates the creation of VOD assets to simplify and scale the process of VOD asset creation. Assembles complex VOD compositions from video, audio, graphic and metadata elements. Accessible through a graphical user interface and automation interface.

License Includes:

- VOD/DAI Operator Portal Network license which enables all portals in a Vantage Domain (V-VOD-PORTALSW)
- 1 Operator portal seat license (V-PORTAL)
- 1 Post Producer Content Assembly Automation license (V-PRODUCER-SW)
- 1 IPTV/VOD Transport Stream Encoder license (V-XCODE-IPTV-SW)
- 1 Transcode license (V-XCODE-SW)
- 1 Metadata license (V-METADATA-SW)
- Vantage Workflow Designer
- Vantage Management Console

GPU Acceleration is available for this product when running on a Lightspeed Server.

Does not include first year's Software Annual Maintenance and Support which must be ordered at time of purchase.

VOD Producer Dynamic Ad Insertion (DAI)

DAI is a single server license software option to Vantage Post Producer. Provisions VOD content for Dynamic Ad Insertion and measurement during the creation process. User defined DAI ad breaks are inserted during the VOD assembly process. VOD Producer DAI creates multilayer video compositions with DAI ad breaks and Nielsen D4 audio watermarking and produces the metadata documents for DAI ecosystem partners, Canoe Ventures and Nielsen. Accessible through a graphical user interface and automation interface.

License Includes:

- VOD/DAI Operator Portal Network license which enables all portals in a Vantage Domain (V-VOD-PORTALSW)
- 1 Operator portal seat license (V-PORTAL)
- 1 Post Producer DAI Content Assembly Automation license (V-PRODUCER-DAI-SW)
- 1 IPTV/VOD Transport Stream Encoder license (V-XCODE-IPTV-SW)
- 1 Transcode license (V-XCODE-SW)
- 1 Metadata license (V-METADATA-SW)
- 1 Nielsen Watermarking license (V-NIELS)
- Vantage Workflow Designer
- Vantage Management Console

GPU Acceleration is available for this product when running on a Lightspeed Server.

Does not include first year's Software Annual Maintenance and Support which must be ordered at time of purchase.

VOD Portal

The VOD Portal is a paid option that allows creating VOD media assets supporting VOD metadata such as rating and V-Chip, stitching and trimming of clips, and DAI.

Tempo Content Re-Timing Software

Tempo is a solution for re-timing file-based content and intelligently decreasing or increasing the running time of shows and segments. Tempo utilizes sophisticated video and audio time compression algorithms that deliver superior quality and faster turn-around times. Tempo runs on the Vantage media processing platform and offers all of the benefits of complete integration with the world's best workflow management and transcoding system.

Tempo Software is an option for Vantage and includes:

- Tempo Content Re-timing software
- One (1) Workflow Portal seat (V-PORTAL-SW)
- Metadata option for Vantage (V-METADATA-SW)

The Tempo product requires Vantage Transcode or Transcode Pro in addition to Vantage Analysis or Analysis Pro. Also requires 2 days on-site installation, purchased separately. N+1 Redundancy may be added with Vantage Array license and compatible hardware. Fully compatible and extensible with all Vantage transcoding, workflow, partner integrations and system management products. Does not include first year's Software Annual Maintenance and Support which must be ordered at time of purchase.

Lightspeed Servers

The Lightspeed servers are Windows machines designed to run Vantage at optimum speeds. Vantage comes pre-installed on the Lightspeed server and ready to run (software sold separately.) These servers accelerate video processing for all Vantage Transcode products (Transcode, Pro, and Pro Connect), Post Producer and TrafficManager. Vantage v4.0 or later is required. Multiple models include the K20, K40SSD, K80, and K80SSD. For details about model features and differences, please see the Telestream.net web site and the *Lightspeed Server Guide*.

Vantage automatically adds a *Lightspeed* system variable to any Lightspeed-aware services running on a Lightspeed server. Actions can use the variable to implement Run On rules or to report or record job information.

Lightspeed Options and Bundles

Lightspeed fallback rules are included in all models of Vantage. Various Lightspeed options are available, including Ethernet adapters, Fibre Channel HBA options, and SSD drive upgrades. Lightspeed bundles are available to combine Lightspeed servers with Transcode Multiscreen, Transcode IPTV VOD, Transcode Connect, and Transcode Pro Connect Vantage software combinations. Contact [Telestream Sales](#) for more information.

Lightspeed Live Capture

Lightspeed Live Capture uses a Lightspeed server with capture card and software to capture live media to files. Four input channels of SD/HD or 1 channel of 4K/UHD via SDI (1080p/60) with 4 ports 10Gb Ethernet in a GPU accelerated capture platform for ingesting multiple video formats, creating mezzanine and AVC MP4 or MXF RDD 25 proxy files simultaneously, and storing them locally or on external networked storage. Operates as a standalone device or as part of a Vantage domain with Capture as an Origin Action in Vantage. Supports SDI inputs and a broad range of file output formats.

Platform Specifications: 1RU rack mount chassis includes dual Intel multi-core processors, 4x 3Gb/s SDI inputs, 4x 10GigE ports, GPU acceleration, over 4TB internal storage, RAID 5 protected, for a total of over 3TB of usable storage. Option to add more than 3TB of additional storage. Hot swappable dual power supplies.

Vantage Client Programs Overview

This chapter provide general information about using Vantage client programs, including starting and stopping, logging in to a Vantage domain, and best practices for accessing Windows files in Vantage.

Note: You manage Vantage licenses in the [Management Console](#). For details on adding, updating, or activating licenses, see *Enabling a Vantage License* in the *Vantage Domain Management Guide*. Depending on how you purchase Vantage features, Telestream may send you additional license files or an updated license file. Follow the instructions accompanying the license file for adding or updating license files.

- [Adding Demo Licenses](#)
- [Windows Vantage Client Program Management](#)
- [Web Application Management](#)
- [Paths for Vantage Storage Overview](#)

Adding Demo Licenses

You should, as a general rule, manage your licenses using the [Management Console](#).

However, for convenience, you can also import demo [license](#) files to your domain directly in [Workflow Designer](#).

When you receive a demo license (an XML file), install it using these steps:

1. Store the demo license file in a location that is accessible to your Vantage domain server.
2. Store a second copy of the file in a safe place.
3. In Workflow Designer, select File > Add/Update Demo License to display the Add/Update Demo Licenses dialog.
4. Navigate to and select one or more licenses, and click Open.
5. Restart Workflow Designer and any other client programs that are open.

Windows Vantage Client Program Management

Vantage provides the following Windows programs:

- [Management Console](#)
- [Workflow Designer](#)
- [Workflow Portal](#)
- [Dublist Portal](#)

These programs are Windows application programs, and they interact with the Vantage domain database to set up and configure, control, and operate the domain. They are often referred to collectively as *client programs* for short.

Note: Vantage Cloud Manager is not described in this topic. For details about using Vantage Cloud Manager, see the *Vantage Cloud User Guide*.

The following topics describe general Windows client program tasks:

- [Starting and Stopping Client Programs](#)
- [Displaying Program Tips & Warnings](#)
- [Displaying the Version of a Windows Client Program](#)
- [Displaying your Domain's Database Version](#)
- [Configuring Server 2008 to Solve Display Problems for Vantage Programs](#)
- [Selecting Vantage Domains and Logging In](#)
- [Changing Vantage Users in Windows Client Programs](#)
- [Changing Passwords in Windows Client Programs](#)
- [Changing or Reloading A Configuration in Workflow Portal](#)
- [Accessing Vantage Help from Workflow Designer](#)

Starting and Stopping Client Programs

All Vantage Windows client programs connect directly to the [Vantage domain database](#), and thus—can only be used on a Windows computer which has access to the domain.

Vantage client programs start and stop like typical Windows programs.

Some client programs require configuration by an administrator before they can function. For example, Workflow Portal and Dublist Portal require application configurations, which are created in the Management Console.

- [Starting Workflow Designer](#)
- [Starting Workflow Portal](#)
- [Starting Dublist Portal](#)
- [Stopping Vantage Windows Client Programs](#)

Starting Workflow Designer

To start [Workflow Designer](#), use one of these methods:

- Select Start > Programs > Telestream > Vantage > Vantage Workflow Designer
- Double-click the Vantage Workflow Designer shortcut on your desktop.



Note: If you are launching Workflow Designer for the first time, you'll be prompted to select and log in to a Vantage domain. See [Selecting Vantage Domains and Logging In](#) for details.

Starting Workflow Portal

Workflow Portal is an optional, licensed Vantage client program that allows operators to browse catalogs or Windows servers to select media, enter/update metadata and variables, and submit jobs. When you start Workflow Portal, if no [license](#) is available, it advises you, and operates in demo mode. When operating in demo mode, you cannot submit [jobs](#) or edit metadata labels.

You can run multiple instances of Workflow Portal on one computer (and one license), so that you can use multiple configurations at the same time. For example, you may be reviewing and submitting assets in one, and setting trim points in another.

User authentication is used to control user access to Workflow Portal configurations. Administrators can choose which Vantage users can utilize a specific configuration. Administrators can also make certain configurations available to everyone.



To start Workflow Portal, do one of the following:

- Select start > Programs > Telestream > Vantage > Vantage Workflow Portal
- Double-click the Vantage Workflow Portal shortcut on your desktop.

Note: If you encounter an error when launching the Workflow Portal, please see [Troubleshooting Workflow Portal](#) for assistance.

If you are launching Workflow Portal for the first time, you'll be prompted to select and log in to a Vantage domain and choose a Workflow Portal configuration. See [Selecting Vantage Domains and Logging In](#) for details.

Starting Dublist Portal

Dublist Portal is provided as part of TrafficManager. You can run multiple instances of Dublist Portal on one computer, so that you can use multiple configurations at the same time.

User authentication is used to control user access to Dublist Portal configurations. Administrators can choose which Vantage users can utilize a specific configuration. Administrators can also make certain configurations available to everyone.



To start Dublist Portal, do one of the following:

- Select start > Programs > Telestream > Vantage > Vantage Dublist Portal
- Double-click the Vantage Dublist Portal shortcut on your desktop.

If you are launching Dublist Portal for the first time, you'll be prompted to select and log in to a Vantage domain. See [Selecting Vantage Domains and Logging In](#) for details.

Stopping Vantage Windows Client Programs

To stop any of the Vantage Windows client programs, use the usual Windows convention—select File > Exit (Control+Q).

You typically don't need to explicitly save work you have performed, because all information is stored in the [Vantage domain database](#), and updated automatically as you make changes. However, when you are editing data (for example, metadata, in the Management Console or Workflow Portal), you do need to save it explicitly. If you attempt to close a dialog window or the program without saving the data, you'll be warned.

Displaying Program Tips & Warnings

Both [Workflow Designer](#) and Workflow Portal provide tips and warnings in tooltips and dialogs. To hide these tips and warnings, Check the Hide checkbox on one of the dialogs, or select Options > Hide Tips & Warnings. To reset them to their default behavior, select Options > Restore Tips & Warnings.

Displaying the Version of a Windows Client Program

To determine which version of a Vantage Windows client program you're using, select Help > About.

Displaying your Domain's Database Version

To determine a Vantage domain's database version number, in Workflow Designer select Help > Database Version.

Configuring Server 2008 to Solve Display Problems for Vantage Programs

When using [Workflow Designer](#) on Windows Server 2008, you may have problems minimizing windows you've maximized by dragging them to the top of your monitor. To disable this Windows AeroSnap feature, open the Control Panel > Ease of Access Center > Change how your mouse works, and check Prevent windows from being automatically arranged when moved to the edge of the monitor.

In addition, for Workflow Designer to display as designed, the Windows theme on Server 2008 R2 should be set to Windows 7 Basic. This theme is only available when the Desktop Experience feature is installed. If Remote Desktop Connection is used to connect to the server, then the Remote Desktop Services > Remote Desktop Session Host > Desktop Composition role feature must be installed in order for the Windows 7 Basic theme to be available.

The Themes service must be started and set to the automatic startup type. If the Themes service hasn't been started before, the computer must be restarted for it to take effect and for the Windows 7 Basic theme to be made available.

Selecting Vantage Domains and Logging In

These tasks are described in the following topics:

- [Selecting the Vantage Domain](#)
- [Logging In to a Vantage Domain](#)
- [Creating a Workflows Category in Workflow Designer](#)
- [Selecting a Configuration in Workflow Portal or Dublist Portal](#)

Selecting the Vantage Domain

You may have multiple Vantage domains in your environment. (For example, domains for different departments, shows, or geographic locations, or for scaling your encoding capacity or using a Vantage Lightspeed server.) Each [Vantage domain](#) is a separate, stand-alone Vantage system, whose [Vantage domain database](#) and services do not interact with other domains.

You might need to manually select a domain from a Vantage client program for the following reasons:

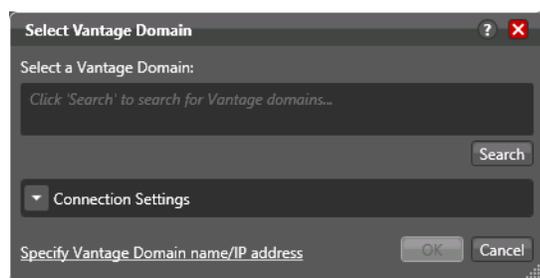
- You are starting a Vantage client Windows program for the first time.
- Your work requires that you connect to a different Vantage domain.

After you select a Vantage domain, the program remembers it and connects to the domain automatically each time you restart the program. You can change domains at any time.

To select a domain, do the following:

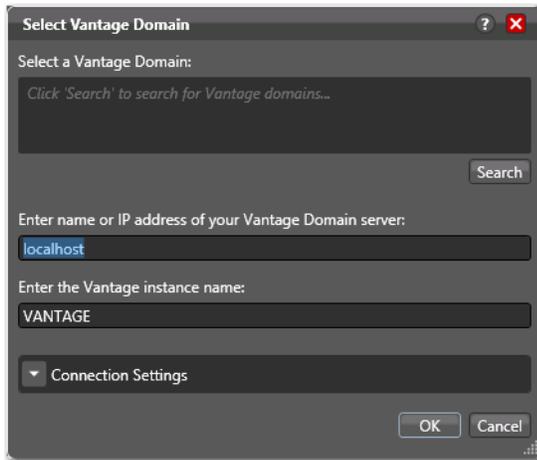
1. In any client program, select File > Change Vantage Domain (in [Workflow Designer](#), you can also right-click in the Workflows panel away from any buttons and select Change Vantage Domain from the context menu).

The program displays the Select Vantage Domain panel.

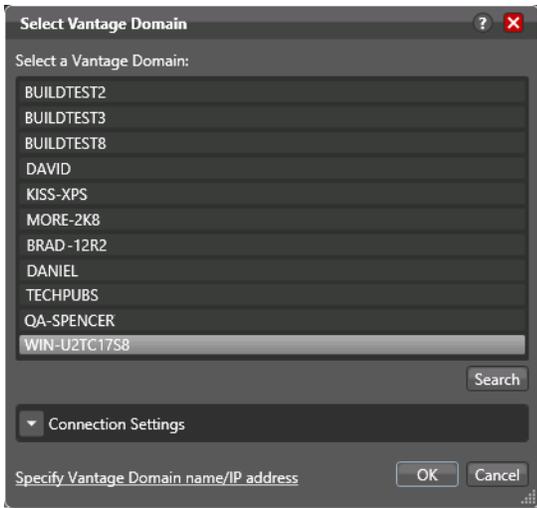


Take one of two actions:

2. If you know the domain's identity or the domain isn't listed during a search, click Specify Vantage Domain Name/IP Address to expand the dialog.



- a. Enter the Vantage domain's server name (for example, *VantageServer203*) or IP address and Vantage database instance name if different than the default, and click OK to connect. If you do not know what to enter, contact your Vantage domain administrator.
3. If you don't know the domain's identity, click Search to locate all domains on your network.

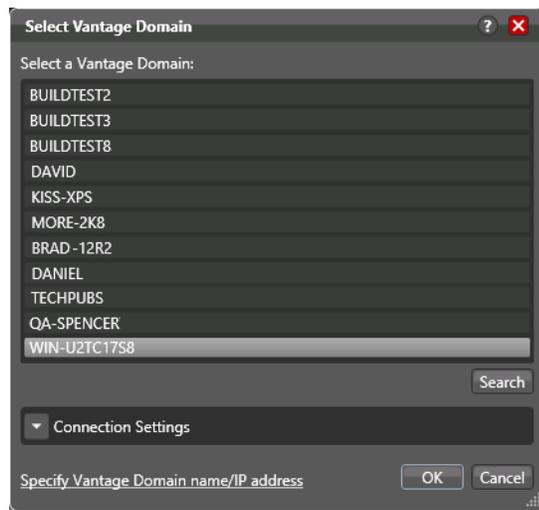


- a. Select the domain you want to connect to, and click OK.
If connection is successful and you're prompted to enter a user name and password, see [Logging In to a Vantage Domain](#).
- When you change domains, the program closes its connection (if any) with the current domain and connects to the new domain.

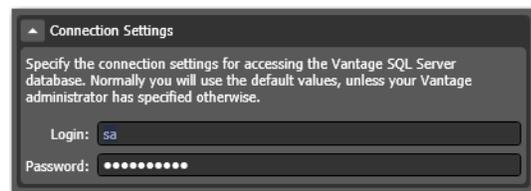
Note: If your domain isn't listed or you can't connect, contact your Vantage domain administrator and/or refer to [Connecting to an Unlisted Domain](#) or [Connecting with Custom Login Settings](#).

Connecting with Custom Login Settings

If the Vantage domain is using a SQL database where the default settings for the MS SQL server account were changed during installation, open Connection Settings to display the SQL Server login and password settings.



The program displays the SQL Server login and password settings.



Enter the Vantage database SQL server account user name and password (obtained from your Vantage administrator), and click OK to connect.

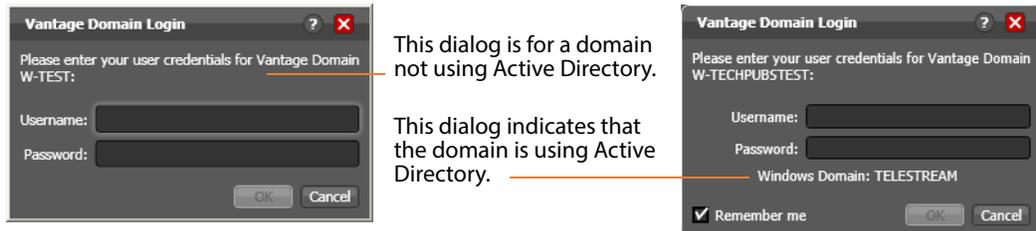
Logging In to a Vantage Domain

To access a Vantage domain, you may need to log in, providing your user credentials. Your Vantage administrator will either provide you with a Vantage user name or configure Vantage to work with your Windows user name.

Note: Administrators can enable or disable user authentication. They can also choose whether or not to use Windows user names by enabling or disabling Windows Active Directory. Both settings are configured in the Vantage Management Console.

Note: If you don't have a Vantage user name, ask your Vantage administrator to create one for you or add your Windows user as an authorized Vantage user.

If login is required, the Vantage Domain Login dialog displays.



Enter your user name, and password if required, and click OK to connect.

In [Workflow Designer](#), you may be prompted to create a new category—see [Creating a Workflows Category in Workflow Designer](#) below.

In Workflow Portal and Dublist Portal, you'll be prompted to select a configuration before you can continue—see [Selecting a Configuration in Workflow Portal or Dublist Portal](#).

Creating a Workflows Category in Workflow Designer

When you log in, the only categories that display are those that you are authorized to access. (If your user has administrative privileges, all workflows in the domain are displayed.) Access to workflow categories by user is controlled in the [Management Console](#).

When you log in, if there are no categories available then you will be prompted to create one. If you're prompted to create a new category, click OK to display the Create New Category dialog.

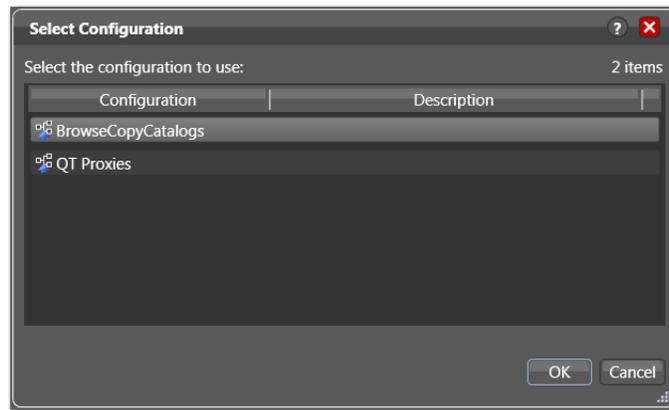


Enter the name for this category, and click OK.

Selecting a Configuration in Workflow Portal or Dublist Portal

If a configuration has been previously selected, it is loaded and used automatically. Otherwise the Select Configuration window displays, enabling you to select a configuration to use during this session.

Note: The configurations in the list include public configurations (usable by any Vantage user), plus those that your Vantage user account is authorized to use. Access to configurations is controlled by the Vantage domain administrator.

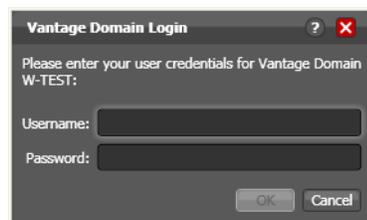


Select a configuration from the list and click OK.

Changing Vantage Users in Windows Client Programs

When you are logged in to a Vantage domain that has User Administration enabled (in the Vantage [Management Console](#)), you can change to another Vantage user or Active Directory user (depending on your User Administration settings).

Select File > Change Vantage User to display the Vantage Domain Login dialog.

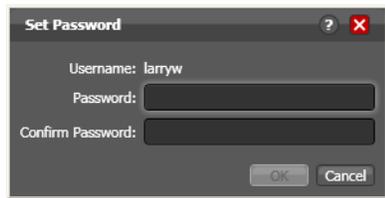


Enter your user name, and password if required, and click OK to log in.

Changing Passwords in Windows Client Programs

When you are logged in to a Vantage domain that has User Administration enabled (in the Vantage [Management Console](#)) and Windows Active Directory *is not being used*, you can change the password of the Vantage user currently logged in.

Select File > Change Password to display the Set Password window.



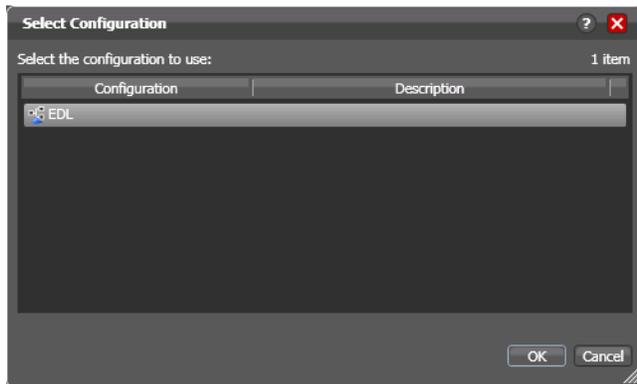
Enter a new password, confirm the password, and click OK to update the password for this user. The next time you log in to the Vantage domain with this user, you'll need to use the new password.

Changing or Reloading A Configuration in Workflow Portal

To change configurations when you need to perform other tasks *in the same domain* or when you have changed a configuration and need to obtain the current version, follow these steps:

1. Select File > Change/Reload Application Configuration.

Workflow Portal displays a list of configurations for this domain.



2. Select the configuration you want to use or update, and click OK.

Workflow Portal opens the configuration, and displays the appropriate user interface for this configuration.

Accessing Vantage Help from Workflow Designer

These topics describe how to access Vantage help systems from [Workflow Designer](#):

- [Displaying the Vantage User Guide](#)
- [Displaying Context-Sensitive Help Topics](#)
- [Displaying Man Pages](#)

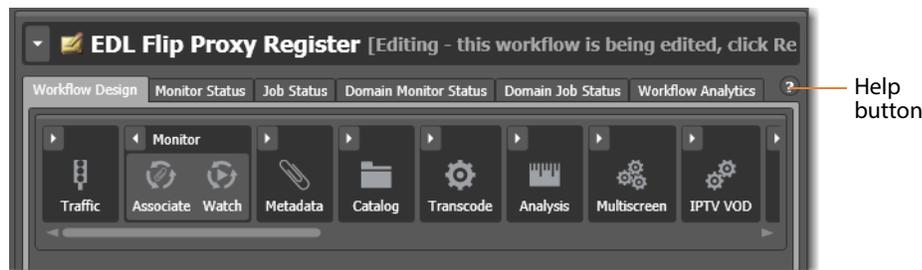
Displaying the Vantage User Guide

There are several ways to access the *Vantage User Guide* in Workflow Designer:

- Select Help > Getting Started to display the Tours topic in the *Vantage User Guide*. The tours introduce you to Workflow Designer and describe how to create and configure workflows, submit [jobs](#), and monitor jobs.
- Select Help > Contents to display the *Vantage User Guide* table of contents.
- Select Help > Index to display the *Vantage User Guide* index.
- Select Help > Search to display the *Vantage User Guide* search tab, where you can enter search criteria to locate topics you want to read.
- If you have access to the Internet, select Help > Online Help to display the Vantage Online Help section of the Telestream web site, where you can access all Vantage documentation.

Displaying Context-Sensitive Help Topics

In Workflow Designer, you can click the help button  (see the figure below) to display the topic in the User Guide that relates to the specific program feature that has focus.

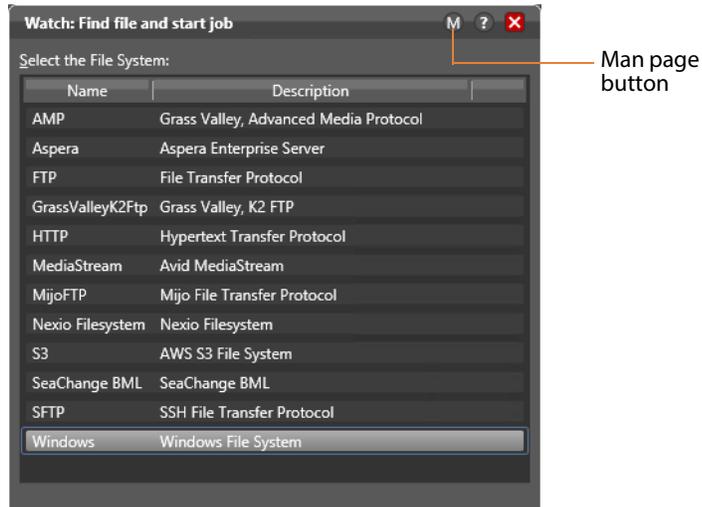


If the topic is not available, you can search the entire User Guide for information.

Displaying Man Pages

In Workflow Designer action inspectors, *man pages* are context-sensitive help topics that provide detailed information for [action](#) configuration options.

To open the man page for any action inspector panel, click the **M** button.



When the man page window is open as you proceed through a series of [Inspector](#) panels, the man page changes as necessary, as you display each panel.

Web Application Management

Vantage provides the following web applications:

- [Web Dashboard](#)
- [Job Status Views Web Application](#)
- [Workflow Portal Web Application](#)
- [Dublist Portal](#)
- [Dublist Portal](#)

The following topics describe general web application tasks:

- [Web Application Browser Requirements](#)
- [Starting & Stopping Vantage Web Applications](#)
- [Logging In or Changing Domains from Web Applications](#)
- [Returning to the Vantage Web Applications Menu](#)
- [Logging Out of a Vantage Domain](#)
- [Changing Passwords in Web Applications](#)
- [Displaying Version Information](#)
- [Accessing Vantage Help in Web Applications](#)

Web Application Browser Requirements

Vantage web applications are implemented for execution in Microsoft IIS. JavaScript and cookies must be enabled to use Vantage web applications properly.

Telestream recommends the following web browsers for use with Vantage web apps:

- Internet Explorer 11—32-bit or 64-bit (Windows only)
- Chrome—current version (MacOS X and Windows)
- Safari—current version (MacOS X only).

To configure Internet Explorer for use with Vantage web applications, do the following:

1. Enable Active Scripting—Open Internet Explorer, select *Tools > Internet options*, select the Security tab, click *Custom level*, scroll down to Scripting, click Enable under *Active scripting*, click OK, and click OK to close the Internet Options dialog.
2. In Internet Explorer, disable Enhanced Security Configuration (ESC) using the Windows Server Manager. Enter the hostname or IP address into the address bar that is used to set up the HTTP alias. For example, if you use a hostname to set up the alias, then you use that hostname to browse to the web apps. If you use an IP address, you should use that address to browse to them. For example, *http://192.168.0.1/Vantage/Portal/ConfigSelect.aspx*. The use of *localhost* is not supported.
3. When using the [Workflow Portal Web Application](#) on a Windows Server platform, you must install the Desktop Experience feature in order to view proxy media in the HTML5 Media Player.

Starting & Stopping Vantage Web Applications

For information on starting and stopping web applications, see the following topics:

- [Starting Web Applications](#)
- [Licensing Issues When Starting Workflow Portal](#)
- [Stopping Web Applications](#)

User authentication may be used to control user access to Workflow Portal configurations. Administrators can choose which Vantage users can utilize a specific configuration. Administrators can also make certain configurations available to everyone. (These functions are performed in the Vantage [Management Console](#).)

Starting Web Applications

Logging in to a Vantage domain from a web application is a bit different than logging in from a Vantage Windows client, such as [Workflow Designer](#). When you log in from a web application, you first start the web application by accessing the web server via a browser. Then, you actually log in to the Vantage domain after that.

To start Vantage web applications from the Vantage home page, do the following:

1. Open your web browser and enter the Vantage web application home page URL:

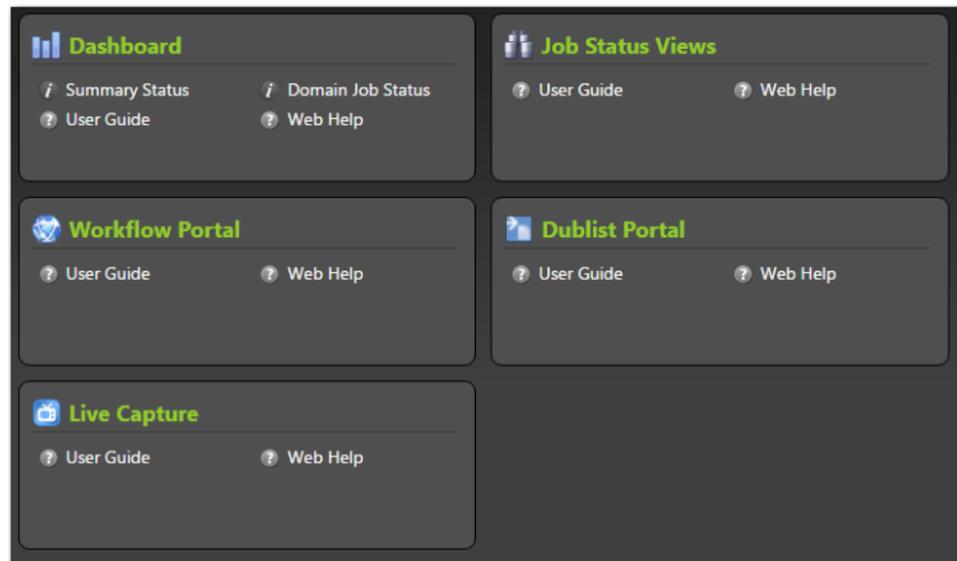
http://<IISServerName>/Vantage/

where <IISServerName> is the DNS name of the IIS server (or its IP address)—by default, the same as the Vantage domain server.

Note: If you do not know the name of the Vantage IIS server (by default, the same server where the [Vantage domain database](#) is hosted), contact your Vantage administrator or IT department.

2. If you are prompted to select a domain, select the domain name, and click OK.
The first time you connect to a Vantage domain from this computer (or you deleted your browser's cookies), select the domain from the list and click OK to continue. Refer to [Logging In or Changing Domains from Web Applications](#) for more information.
3. Enter an authorized user name and password.

Vantage displays the Vantage web applications menu (or home page).



Click the web application you want to use.

You can also launch each web application directly, by using its URL:

- *Dashboard*—<http://<ServerName>/Vantage/Dashboard/>
- *Job Status Views*—<http://<ServerName>/Vantage/JobStatusViewer/>
- *Workflow Portal*—<http://<ServerName>/Vantage/Portal/>
- *Dublist Portal*—<http://<ServerName>/Vantage/DublistPortal/>
- *Live Capture*—<http://<ServerName>/Vantage/CapturePortal/>

Licensing Issues When Starting Workflow Portal

Workflow Portal is an optional, licensed web application. When you start it, if no [license](#) is available, it advises you, and operates in demo mode. When operating in demo mode, you cannot submit [jobs](#) or edit metadata labels.

You can also run multiple instances of Workflow Portal on a single computer, so that you can use more than one configuration at a time—and each running instance requires its own Workflow Portal license. For example, you may be reviewing and submitting assets in one configuration, and setting trim points in another.

Stopping Web Applications

To stop a web application, close the web page tab, close the web browser, or simply go to another web site.

Logging In or Changing Domains from Web Applications

When you start a web application, you may need to complete additional tasks before you can begin working. If additional tasks are required, Vantage will prompt you to complete those tasks, which are described in the following topics:

- [Selecting the Domain](#)
- [Logging In](#)

Selecting the Domain

Each *Vantage domain* is a separate, independent Vantage system. As a Vantage user, you might need to select a domain for the following reasons:

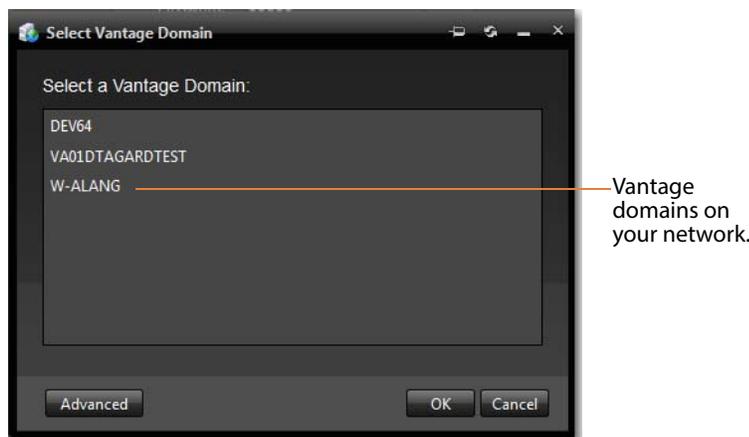
- You are starting a web application for the first time on a given computer.
- Your work requires that you connect to a different Vantage domain.

After you log in to a Vantage domain, the web app remembers it and connects automatically each time you restart the program. You can change domains at any time.

To select a domain, do the following:

1. In any web app where you want to change Vantage domains, select Change Domain in the application title panel.

The web application displays the Select Vantage Domain dialog.



2. To select a listed domain, select a domain in the domain list, and click OK.

When you change domains, your web application closes its connection and connects to the new domain.

If your domain is not listed, or your connection attempt is unsuccessful, contact your Vantage domain administrator and refer to the following topics:

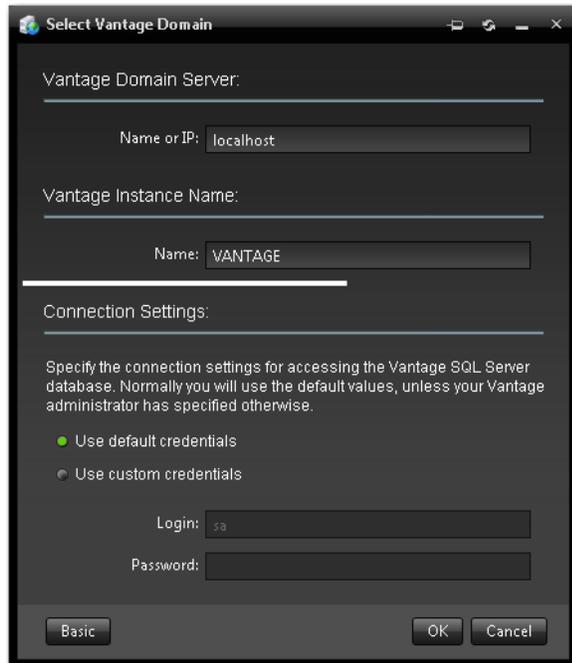
- [Connecting to an Unlisted Domain](#)
- [Connecting with Custom Login Settings](#)

Connecting to an Unlisted Domain

If the domain you want to connect to is not in the list, click *Advanced*. To connect to an unlisted domain, do the following:

To connect to an unlisted domain, do the following:

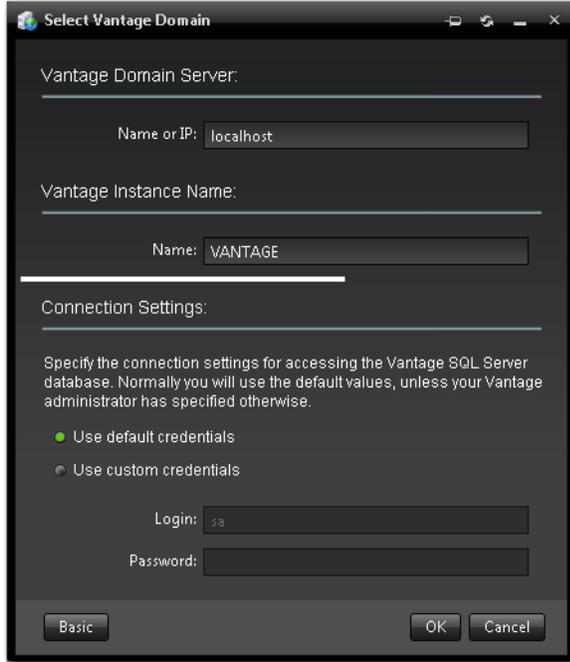
1. In the Select Vantage Domain dialog, click *Advanced*.
2. If the domain is not in the list, click *My Vantage Domain is not Listed* to display the Vantage domain server Name/IP field (see the figure below).



3. Enter) the domain database server's computer name (for example, *VantageServer203*) or its IP address and click OK to connect.
4. Specify the name of the Vantage database instance, if different than the default VANTAGE instance.

Connecting with Custom Login Settings

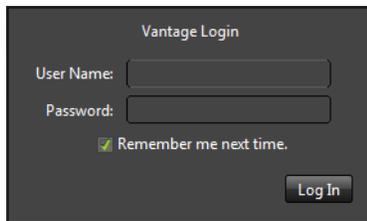
If the Vantage domain is installed on a SQL database where the default settings for the MS SQL server account were changed during installation, open Connection Settings to display the SQL Server login and password settings.



Select Use Custom Credentials, and enter the Vantage database SQL server account user name and password (obtained from your Vantage administrator), and click OK to connect.

Logging In

If you are accessing a Vantage domain for which user login is required, Vantage displays the Vantage Login dialog shown in this figure:



Note: If you do not have an authorized user name, contact your Vantage domain administrator.

To log in to the Vantage domain, do the following:

1. Enter your Vantage user name and password (if required) or use your Active Directory user name and password and click OK to connect. Your Vantage administrator will either give you a user name, or instruct you to use your Windows user name.
2. If you are prompted to select a domain, select the domain name, and click OK.
 The first time you connect to a Vantage domain from this computer (or after you delete browser cookies), select a domain from the list, and click OK to continue. Refer to [Logging In or Changing Domains from Web Applications](#) for more information.
3. Enter the user name and password assigned by your Vantage Administrator, then click Log In.

Note: The default user name is *Administrator* without a password.

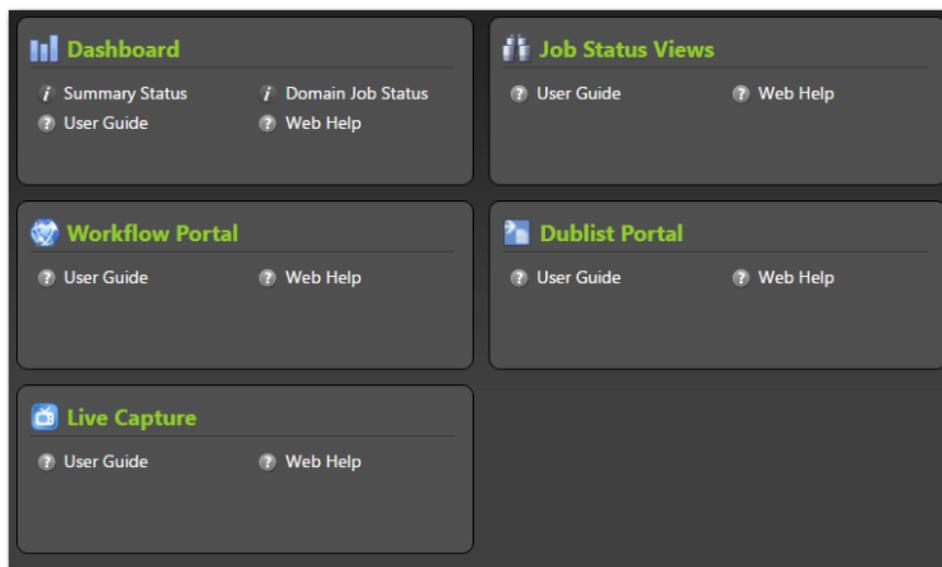
4. Check *Remember me next time* to store the authentication token in a persistent cookie in the browser. This keeps you authenticated if you close your browser and reopen it again.

If you entered the Vantage URL, Vantage displays the Vantage web application menu (see the figure below), so you can select any Vantage web application. Otherwise, your web application displays.

Returning to the Vantage Web Applications Menu

To return to the main web applications menu so that you can run another Vantage web application, click on the home button in the title panel.

If the title panel is hidden, click the show/hide control.



Logging Out of a Vantage Domain

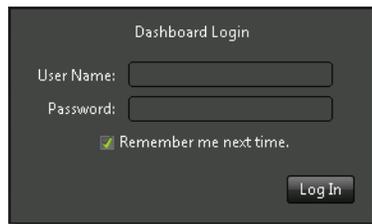
If you are viewing information that is sensitive, or viewing an operational application (vs. a view-only application), you might want to log out when you leave your computer on and unattended. You must log out when you want to change domains.

To log out of any web application, click Logout in the title panel.

Changing Vantage Users in Web Applications

When you are logged in to a Vantage domain and User Administration is enabled (in the Vantage [Management Console](#)), you can change user names. To log in with a different user, do the following:

1. Select Log Out (upper right corner) to display the Domain Login dialog (in this figure, it depicts logging into the Dashboard as a sample).

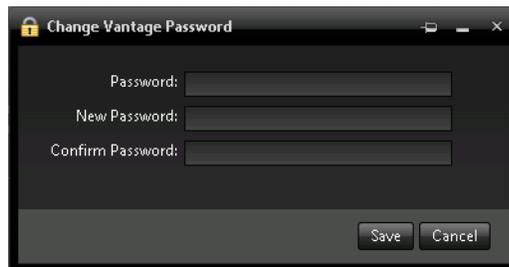


2. Enter your user name, and password if required, and click OK to log in.

Changing Passwords in Web Applications

If you are logged in using a Vantage user name (not a Windows user name), you can change your password. Do the following:

1. Click Change Password (upper right corner) to display the Set Password dialog.

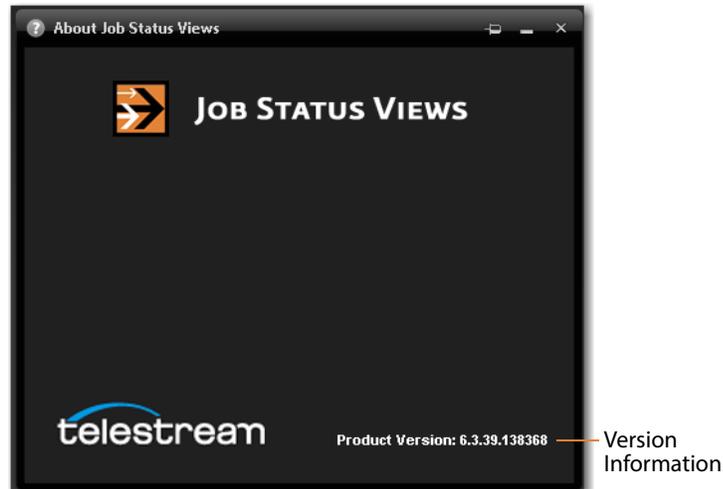


2. Enter your new password, confirm the password, and click OK to change it.

The next time you log in to the Vantage domain, use your new password.

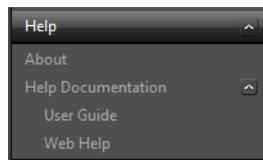
Displaying Version Information

To display version information in a web application, click About in the Help menu.



Accessing Vantage Help in Web Applications

The Help menu in the web applications is at the bottom of the left, command column.



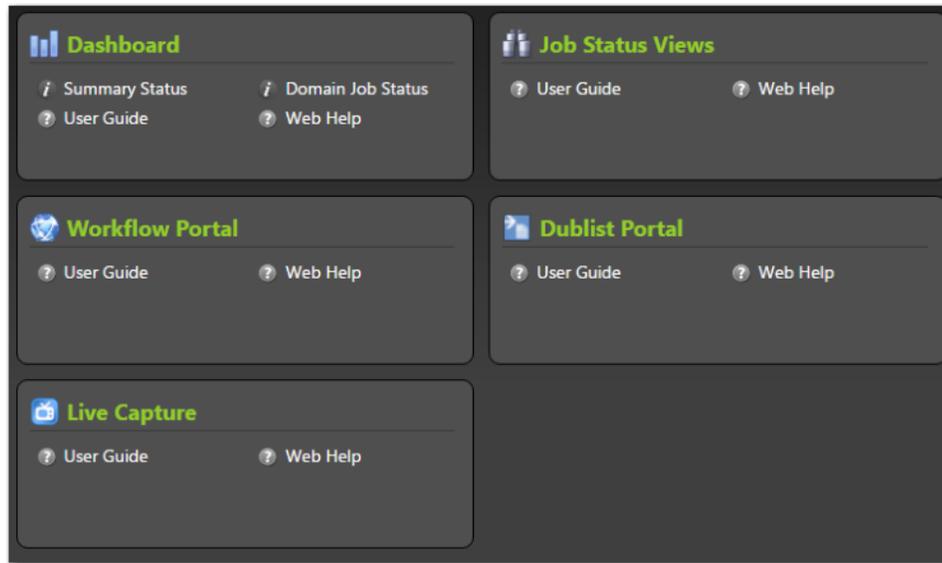
These menu items provide access to the following information and documents:

- *About*—Displays the web application’s version number.
- *User Guide*—Displays the *Vantage User Guide* (this guide) in PDF format. The PDF version contains bookmarks, and you can use the PDF search option to search for one or all occurrences of a term. This is also the best format for printing.
- *Web Help*—Displays the *Vantage User Guide* (this guide) in HTML format. Web Help features include Contents, Index, Search, and Favorites pages. You can use Favorites to save links, so that you can quickly display an important topic.

To open the User Guide PDF or the web library, do the following:

1. Locate the Help menu in the left panel of the web application.
2. If no entries display under Help, click the control to the right to display the list.
3. To open the PDF version of this guide, click User Guide.
4. To open the web library, click Web Help.

You can also view help directly on the home page (applications that display depend on the licenses you own—Dublist Manager, for example).



For each application, you can click on the User Guide, or click Web Help for the specific application you're interested in.

Paths for Vantage Storage Overview

Vantage *stores* are named locations for temporary files. They are used in Vantage to conveniently store and access working media and [attachment](#) files, and to write media and other output files. Many Vantage services require access to files; Windows clients such as Workflow Portal also read and write files. These programs (both Windows programs and services) may run on one computer. Usually, however, they are distributed on many computers in a Vantage array. In distributed Vantage arrays, file access must be managed to ensure that the all programs can function correctly.

Vantage stores can be specified on Windows computer using the following forms:

- UNC paths (shares): `\\ComputerName\Sharename`
- Drive-letters: `C:\folder\folder`

If all Vantage services, clients, Vantage stores and folders are on the same server (an [All-in-one domain](#)), you can use either form. However, Telestream recommends that you always use the UNC path form to reduce file access problems. It is a requirement when you are operating in a Vantage array.

Drive-letter paths are defined in the context of a local computer; it does not identify the computer that hosts the drive. This prevents them from being useful in arrays. For example, if you specify a Vantage store on drive C using a drive letter, and a Workflow Portal operator on a different computer tries to view files in that store, Workflow Portal will search for files on drive C on the operator's computer, not the Vantage server.

In another example, you create a workflow in [Workflow Designer](#) installed on Computer A. It has a Watch action, which is executed by a Vantage Monitor Service running on Computer B. You specify a [hot folder](#) on drive C on Computer A, where Workflow Designer is installed. When the service executes the Watch action, it attempts to locate the hot folder on Computer B's C drive, which does not exist.

When any Vantage service or client program needs to access and use Vantage storage or a directory on a different computer, you must specify the path using the UNC form. When services or clients will access Vantage storage from another computer, the Vantage storage location or directory must be published as a share, and access must be granted to the appropriate Windows users. For more information, see [Windows Authentication Guidelines](#) in the *Vantage Domain Management Guide*.

When you want to use a SAN system, be aware that some SAN systems expose the shared drive as a letter (mapped) drive (for example, X:) that is visible on any client of the SAN. You can utilize SAN drives via a letter drive reference, provided that each Vantage server is a client of the SAN and that all mount points use the same letter.

Note: If you are creating a store to hold proxy files viewed in Workflow Portal, be sure to reference the store with a UNC path. Some SAN clients do not allow frame-accurate representation of proxies when using shared drives.

Vantage Workflow Designer Tours

These tours are designed to help you learn how to create and configure workflows in [Workflow Designer](#), and submit media for processing. As you gain hands-on experience with Workflow Designer in Vantage, you'll become familiar with important Vantage concepts, develop a working knowledge of Vantage and its components, and gain proficiency in using it to meet your media processing requirements.

Note: Sample workflows with short media samples are provided on the Telestream web site: <http://www.telestream.net/telestream-support/vantage/workflow-examples.htm>. Unzip the zip file and save the media in a convenient location. The XML files are sample workflows that you can import using the *Workflow Designer > File > Import Workflows* menu selection. Some of the tours in this chapter use the samples, and some of the tours require you to build the workflows yourself.

Tours

- [Tour 1: Creating and Configuring Workflows](#)
- [Tour 2: Processing Media in a Workflow](#)
- [Tour 3: Using the Workflow Design Workspace](#)
- [Tour 4: Transcoding Files](#)
- [Tour 5: Using Nicknames to Identify Files](#)
- [Tour 6: Processing Attachments in Workflows](#)
- [Tour 7a: Using Catalogs and Binders in Ingest Workflows](#)
- [Tour 7b: The Workflow Portal and Trim Workflow](#)
- [Tour 8: Controlling Workflow Execution with Variables](#)
- [Tour 9: Decision Making in Workflows](#)
- [Tour 10: Analyzing and Modifying Media Files](#)
- [Tour 11: Understanding and Using Open Workflows](#)

Note: You can take tours 1-4 without a Vantage [license](#). For tour 5 and others, you'll need a trial [license](#) to run workflows. Also, without a license, you can only decode WMV files in workflows. For a trial license, contact sales@telestream.net.

Tour 1: Creating and Configuring Workflows

This tour takes about 15 minutes and provides a hands-on introduction to the concept and process of creating a typical Vantage transcoding [workflow](#). In the following tour, you'll submit some media to [transcode](#), monitor your [job](#) as it executes, and then play the new media that Vantage produced using the workflow.

Vantage [Workflow Designer](#) is an intuitive, flexible, visual workflow design tool for creating and configuring workflows—the workhorses of Vantage. With visual workflow design and [job](#) status views, Workflow Designer provides a powerful, simple way to build an automatic video transcoding process from ingest to transcoding to output and distribution.

A workflow in Vantage is a series of connected [actions](#) arranged in a specific order to automate a media processing task: transcoding a file from one format to another, for example, moving the file to a desired location, and sending a completion message to the user. In addition, metadata processing, analysis and data extraction, and other workflow functions can all be performed in the same workflow.

Vantage provides many types of actions (the smallest amount of work you can specify in Vantage) which you can use to implement a specific media processing solution. For example, a [Watch action](#) continually polls a [hot folder](#) (such as a media server directory or a local or network folder) for incoming media to process—which Vantage performs by automatically submitting a job to the workflow you've created. Likewise, a [Flip action](#) transcodes media, and a [Copy action](#) replicates a file to another location.

The task specified by each type of action (Watch, Flip, Copy, etc.) is actually executed by a Vantage service (a special type of Windows program)—for example, the Watch action is executed by the Vantage Monitor service.

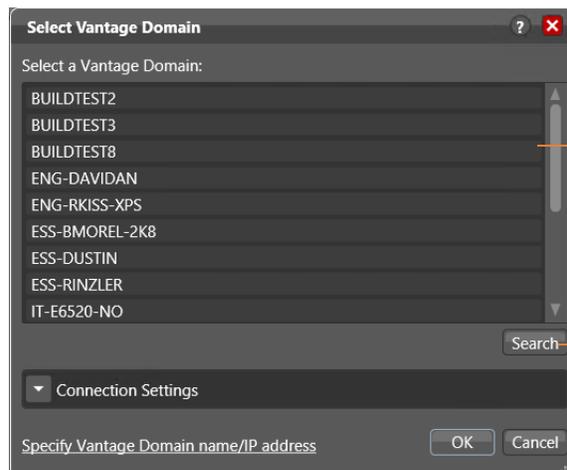
In this tour, you'll log on to your [Vantage domain](#) using Workflow Designer, and create and configure a workflow to encode a QuickTime file.

Starting Workflow Designer and Logging In

You can run [Workflow Designer](#) directly on your Vantage server, or you can install and run it on another Windows workstation on the LAN.

1. Double-click the Vantage Workflow Designer shortcut on your desktop or select Start and search Programs for Vantage Workflow Designer.
2. *First Time Use*—Click Search in the *Select a Vantage domain* window that opens to get a list of domains.

After connecting the first time, Workflow Designer remembers the last domain you used, and connects automatically.



This is the list of domains running on your network. Select a domain and click OK.

Click Search to populate the list of domains.

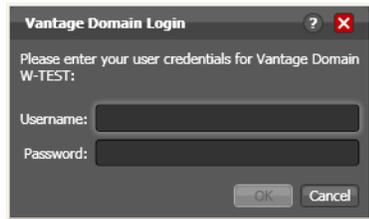
3. Select the domain you want to use, and click OK.

(A Vantage domain is identified by the computer that hosts the [Vantage domain database](#)—you are actually connecting the Workflow Designer client to the domain [database](#). For example, if your [Vantage domain database](#) is on a server named *Vantage_01*, select that name from the domain list to make the connection.)

If you have problems connecting to the domain, see [Connecting to an Unlisted Domain](#) or [Connecting with Custom Login Settings](#), or contact your IT department or Vantage administrator for assistance.

4. If the Vantage Domain Login dialog is displayed, enter your Vantage user name and password in the login dialog to proceed.

Note: If you need a user account, obtain it from the administrator or create one yourself in the Management Console. For assistance, run the console and select Help > Online Help. The default Vantage user name is *Administrator*, with no password.



Once you're logged in, [Workflow Designer](#) displays the main window.

Creating a Workflow Category

When Vantage is installed, there are no categories or workflows stored in the [Vantage domain database](#). So, the first user that logs in to a new domain is prompted to create a new category and workflow.

Note: Even if categories are present, you should make a category for use during these tours, so that your practice workflows don't interfere with the work of others, and that they remain separate from production workflows.

If you're prompted to create a new category, click OK. Otherwise, select File > Create New Category to display the Create New Category dialog.



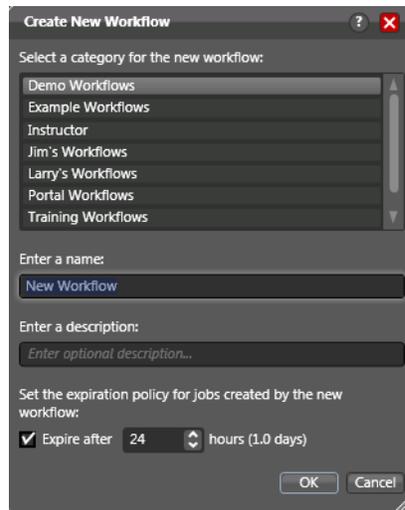
Enter <Your Name> Tutorial Workflows and click OK.

Note: For these tours, the category is referenced simply as *Tutorial Workflows*. Workflow Designer displays help tips as you use it, to help you become familiar with its features. If you don't want Workflow Designer to display them, check *Don't show me this again*.

Creating a Workflow

Now, let's create your first workflow to convert files to a small-frame (proxy) QuickTime file for preview purposes.

1. If you're prompted to create a new workflow, click OK. Otherwise, select File > Create New Workflow. [Workflow Designer](#) displays the Create New Workflow dialog.



2. Select the category you just created, from the list at the top of the dialog.
3. Enter the name `Simple Transcode` (in your *Tutorial Workflows* category), and click OK. (There's no need to change the expiration policy settings now.)

Your new workflow is automatically added to the list in the Workflows panel under the category you created earlier.

When you create a workflow, it is automatically placed in edit mode, so you can begin adding actions.

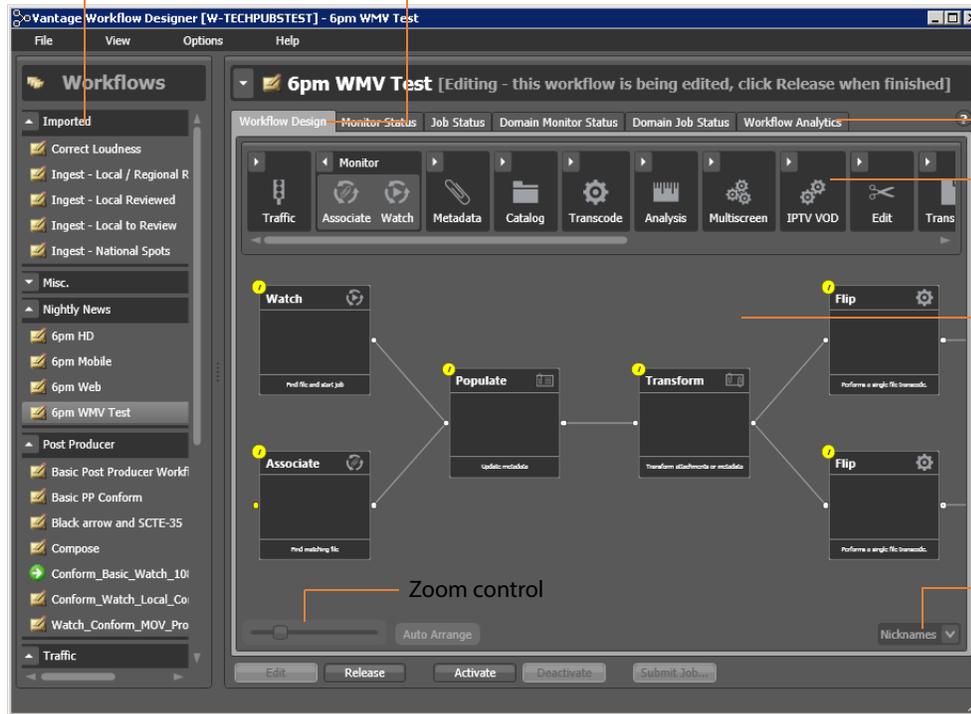
You do not need to explicitly save workflows you create or modify. The changes you make as you create (or update) a workflow are saved automatically in the database.

A Quick Look at the Workflow Designer Main Window

Now that you have a category and workflow created, take a minute to familiarize yourself with [Workflow Designer](#).

Workflows panel—displays your workflows by category.

Use the Workflow Design workspace to construct and configure workflows.



Workflow Designer has workspaces for each key activity.

Actions toolbar—drag actions onto design area to add to workflow.

Workflow design in progress.

Nicknames | Variables View

Workflow Designer has a comprehensive set of menus, and several tabbed workspaces or panels.

On the left is the Workflows panel, with all of the domain's workflows organized by category. To the right are several workspaces, identified by tabs—Workflow Design, Monitor Status, Job Status, and Domain Monitor Status, Domain Job Status, and Workflow Analytics. Each of these tabs displays a workspace for specific tasks you're performing. In this tour, you'll be working in the Workflow Design workspace, where you can create and configure your workflows.

Adding Actions to Your Workflow

You add **actions** and connect them together to form a workflow. Every workflow starts from an **origin action** (such as a Watch action monitoring a **hot folder** for new media to process) and continues execution of all other connected actions, each of which execute in left-to-right order when a **job** is submitted by the origin action.

All of the actions in **Workflow Designer** are arranged in functional groups in the Actions toolbar at the top of the Workflow Design workspace. The actions displayed in your Workflow Designer may vary from what is shown here if some actions are unlicensed.

Note: To re-arrange the groups in the actions toolbar, right-click in the toolbar and select Sort by Name or Sort by Behavior.

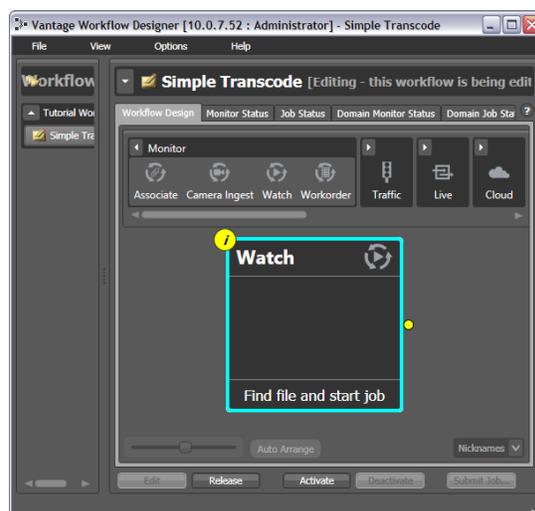
1. Open the Monitor group in the actions toolbar (click the arrow in the upper left corner of the group)—to display the **Watch action** and **Associate action**.



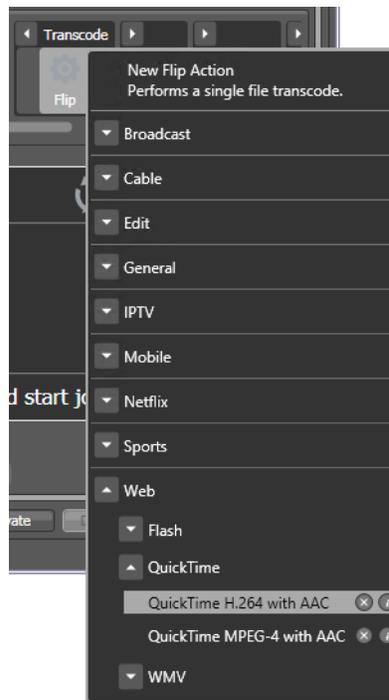
Actions are grouped by category. Click the arrow to open or close the group.

2. Click and drag a Watch action down onto the Workflow Design workspace to add your first action to the workflow. (Notice that it automatically centers itself—Workflow Designer visually optimizes workflow actions automatically.) A Watch action polls a **hot folder** (which you need to specify) for new media files placed in the folder, and starts a **job** to execute the workflow using that file.

Note: You can also copy and paste actions in a workflow to duplicate them. Right-click an action in the workflow and select Copy, then right-click in an empty area in the workspace and select Paste.



3. Open the Transcode group and—rather than dragging an un-configured Flip action onto the workflow—click the Flip action one time to display a comprehensive list of pre-set Flip actions. (You can either use an un-configured action, or select a pre-configured action, which may make configuration easier.)



4. Select Web > QuickTime > QuickTime H.264 with AAC. The (pre-configured) action is added to the workflow and is arranged just to the right of the Watch action.

Connecting Your Actions Together

To create a chain of actions which execute in sequence, you connect them together. Here are ways you can connect actions together:

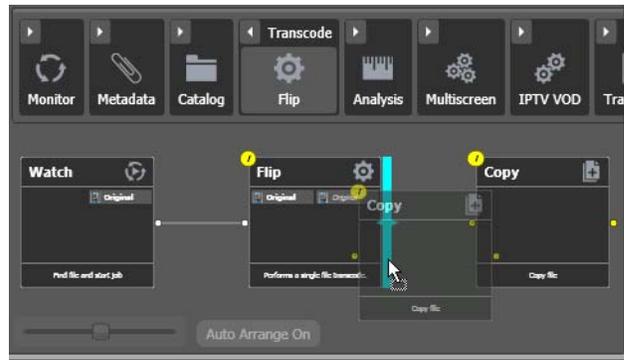
- Click and drag a connecting line from one connector pin to another
- Click and drag an action (either from the actions toolbar or one already in the work area) and bump it into the edge of the action you want to connect it to—until a pale blue vertical line displays. (You must drag your mouse pointer up to the edge of the action you're connecting to).
- Copy an action, and right-click on a connector line and select Paste to add the copied action between the two actions. Or, drag an action onto a connector line until it displays as a larger line. Then, drop it to connect it between the two actions.

There are also two ways to disconnect actions:

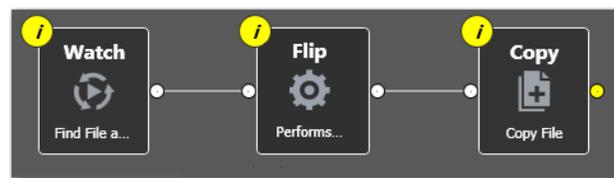
- Hover over the center of the connecting line until a red X displays; click the red X to delete the line, or right-click and select Delete.

Try connecting your actions now:

1. Click and drag a connector line from the yellow connector pin on the right side of the Watch action to the yellow connector pin on the left side of the Flip action. (Connector pins display in yellow until they're connected.)
2. Next, open the Transport action group and drag the Copy action out onto the canvas.
3. Now, click and drag the Copy action so that your mouse is directly over the right side of the Flip action (a connector bar displays in pale blue, as shown below).



4. When the pale blue bar displays, release the mouse—the Copy action automatically connects to the Flip action.



5. Now, delete the Copy action, because it is not required for this workflow. Select it and press Delete—or click the X button in the upper right corner—and confirm the Delete dialog.

Note: Workflow Designer automatically saves your workflow in the database as you modify it. You do not have to save workflows manually.

Configuring the Watch Action

Each [action](#) in a workflow performs a specific task or function (copy a file, for example)—and must be configured to perform the function specifically the way you want for a given workflow.

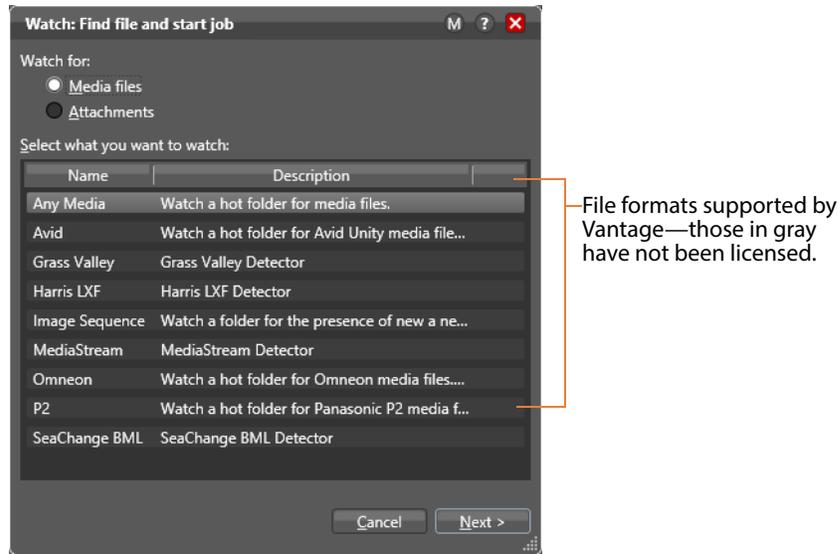
You configure actions using the [Inspector](#). The Inspector is one or more panels with configuration options—and the Inspector for each action varies, according to requirement of the action. For example, you configure a Watch action very differently than a [Flip action](#).

Each action displays an *i* (for *Inspector*) button  in the top left corner; the color yellow indicates that it has not yet been configured (or configured correctly)—it displays blue when properly configured).

Vantage can process a broad array of media types and formats, and access all major file systems. In addition to standard file systems including Windows and FTP, Vantage intelligently works with several complex media types such as Avid reference movies, and P2 camera media files.

You'll configure this Watch action to poll for any type of media file placed in a specified folder on a Windows server.

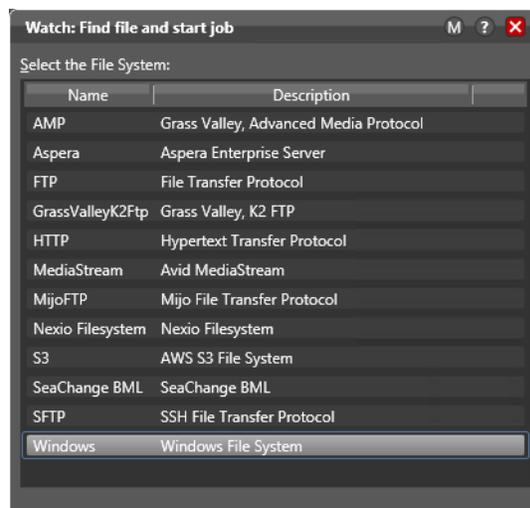
1. Click on the  button of the Watch action (or, just double-click the action) to open the **Inspector**, and display the first panel.



This first panel allows you to choose a special media type to watch for (such as an Avid reference movie). Or, you can select *Any Media* which will work for most media types.

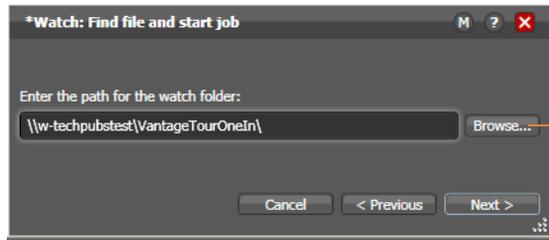
2. Select *Any Media* to poll for any type of new media and click Next. (Media files is checked by default.) Workflow Designer displays the next panel in the **Inspector**.

Note: Entries in these lists that are disabled have not been **licensed**, and thus, are not available to use.



This second panel allows you to choose which type of file system (such as FTP or Windows) that the action will be watching (monitoring).

3. Select Windows as the type of file system to monitor, and click Next to display the next panel in the Inspector.

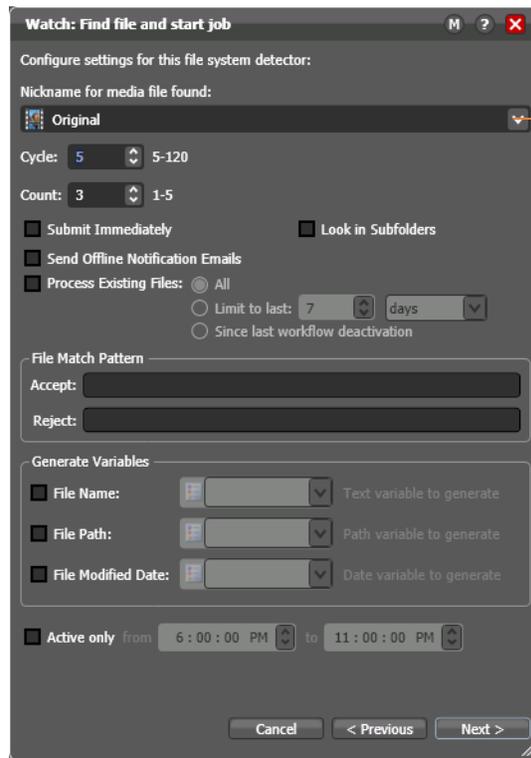


Click Browse to navigate to and select your hot folder or manually enter the path.

Note: If you're using a Vantage [array](#), where Vantage services and clients are distributed among several servers and workstations—or you access or deliver media on network servers—you must use UNC paths to identify media locations. The path must be a share with proper permissions (for example, `\\MyDomainServer\HotFolder`). Otherwise, your workflows will not function because it can't find the path. Be sure to read [Paths for Vantage Storage Overview](#) for guidance.

4. Open Windows Explorer and create a folder directly on the [Vantage domain](#) server for this workflow and name it *VantageTourOneIn*. If you plan to reference it as a share, display Properties and enable sharing.
5. Return to [Workflow Designer](#) and click Browse to navigate and select the fully-qualified path in this field. Or, enter the share path manually. This is now the [hot folder](#) for this workflow.

6. Click Next. Workflow Designer displays the configuration panel.



You must select or enter a nickname in every action that acts on or creates a file, to uniquely identify and track this file instance throughout the workflow.

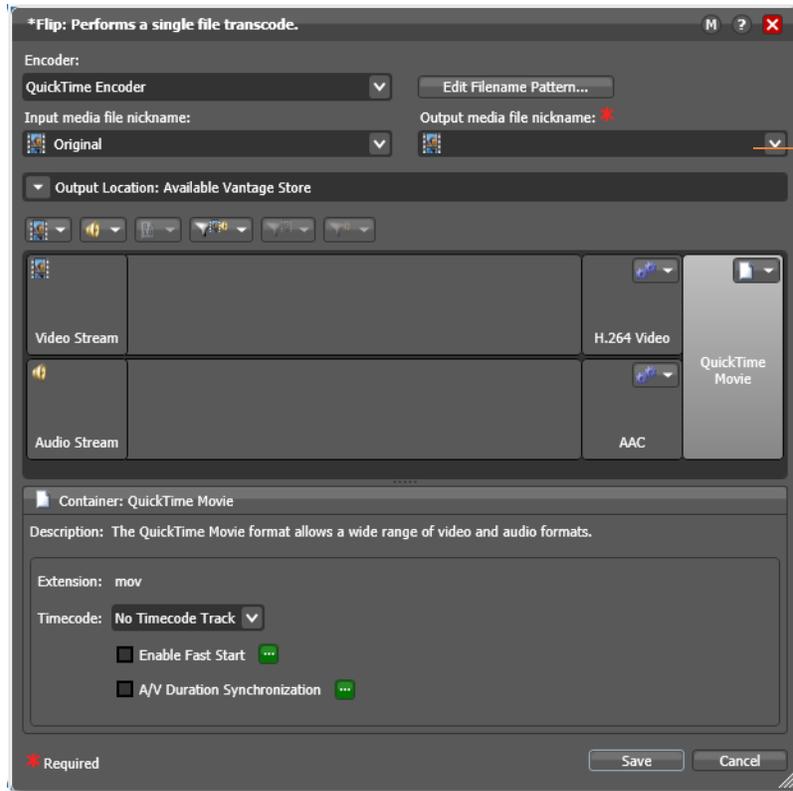
7. Take a moment to review these settings. (You can place your mouse cursor over the controls to display tooltips which describe each setting.) You don't need to make any changes to this panel.
8. Select a nickname for the incoming file—in this case, *Original* is already selected, so you don't need to change it. (You'll learn more about nicknames in Tour 5.)
9. Click the **M** button at the top right of the panel to open context-sensitive help (a *man* page) with detailed information about configuring this [Inspector](#). Wherever you see the context-sensitive help button, you can click it to display details about the part of Workflow Designer you're focused on. (Click the **?** icon to display the User Guide—the document you're reading.)
10. Click Next and then click Finish to save this configuration of the Watch action.

Now that you've configured the [action](#), notice that the Inspector button is hidden to let you know that it has been configured. Move your mouse back over the action—Workflow Designer displays the Inspector button again—in blue. You can always re-open the Inspector to review or change its settings.

Configuring the Flip Action

The **Inspector** button on the Flip **action** is yellow as well—meaning, it must be configured. Why does it need to be configured, given that you selected a pre-configured action? Because the output file's nickname hasn't been specified.

1. Double-click the action to open the Flip Inspector, and note the red asterisk by the Output media file nickname field, indicating that a nickname is required.



You must select or enter a nickname in every action that acts on or creates a file, to uniquely identify and track this file through the workflow during execution of the job.

2. Click the menu to view the list of nicknames for output files. Enter *QuickTime H264 AAC* as the nickname for the file this action creates. Now, all subsequent actions in the workflow can reference the output from this Flip action, simply by referring to the nickname *QuickTime H264 AAC*.

Some of the nicknames in the list are key Vantage nicknames—they enable certain Vantage features or are required in certain actions. When you create your own nicknames, they should be meaningful in the context of your workflow.

Note: The nickname you assign a file has no effect on the output file name (which by default, will be the same as the input filename, except for the extension). For example, if you submit *test.mpg*, this Flip action will create *test.mov*. The input file in this workflow is always referenced by the nickname *Original* and the output file is always referenced by the nickname *QuickTime H264 AAC*.

3. Take a moment to click on each of the video stream, audio stream, and H.264 and AAC codec components, as well as the QuickTime Movie container component in turn, and review the details panel for each component (the details panel displays below the building blocks). Also note the toolbar directly above the building blocks. This is the comprehensive user interface for configuring Flip (transcoding) actions in Workflow Designer.
4. Click Save to save this configuration of the Flip action, and note that the yellow Inspector button no longer displays. Now, when you hover over the action, the Inspector button displays in gray, and when you hover over the Inspector button itself to select it, it displays in blue.

Conclusion

Congratulations! You've just learned how to create a workflow, and learned the basics of configuring actions using Workflow Designer's [Inspector](#). You've created a complete workflow which can detect new media files placed in a [hot folder](#), and convert them to QuickTime format.

In the next tour, you'll learn how to activate workflows, submit jobs, and monitor them.

Tour 2: Processing Media in a Workflow

This tour takes about 15 minutes, and shows you how to process media in your workflow—which involves activating a workflow, submitting media to [transcode](#), monitoring the [job](#) as it executes—and viewing the new media it generates.

You can start a job from an active workflow in various ways:

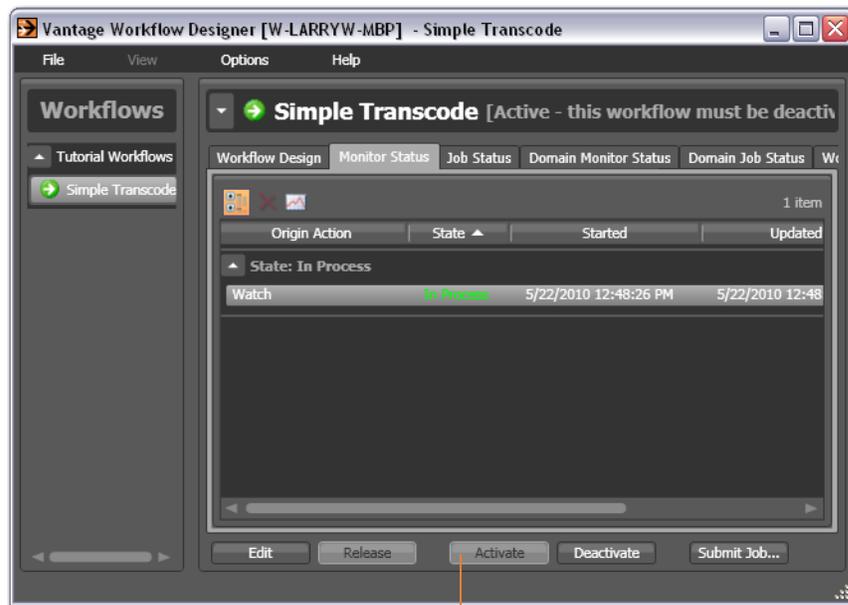
- Place a media file in a [hot folder](#) to submit a job automatically
- In the Watch action [Inspector](#), check Process Existing Media. Then, select a hot folder which already has one or more media files, and activate the workflow—this causes Vantage to process all existing media in the directory, rather than ignore the existing files.
- Click the Submit Job button (at the bottom of the window) and select the file (or files) to submit manually. Just follow the steps in each panel.
- Drag and drop a file (or files) directly onto the origin (Watch or Receive—or Catch or Dublist in TrafficManager) action of a workflow.

There are other, specialized ways to start jobs, but these are the main ones. In this tour, we'll drop a media file in a hot folder to start a job automatically.

Activating a Workflow

To activate a workflow, follow these steps:

1. If you closed Workflow Designer, open it again.
2. Select your *Simple Transcode* workflow in the Workflows panel on the left.
3. Click the Activate button at the bottom of the window.

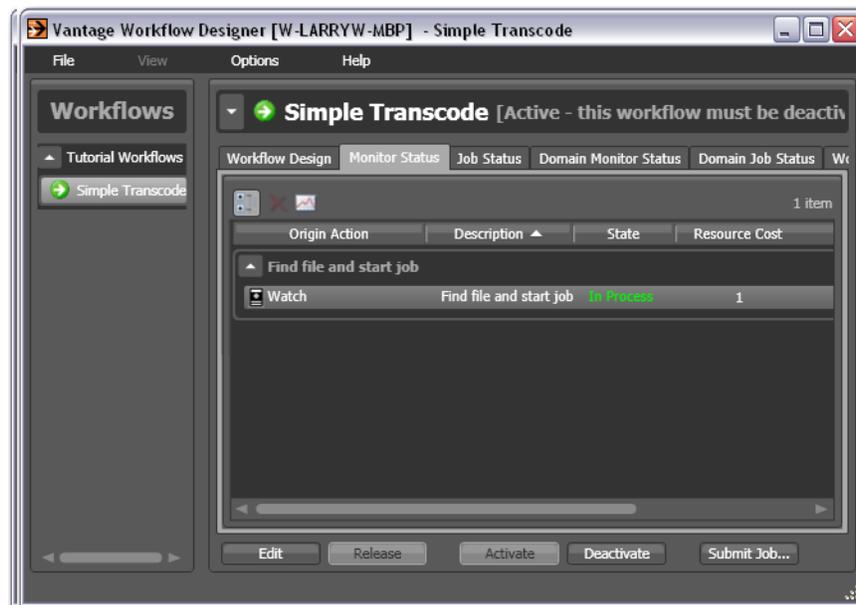


Click Activate to release the workflow from editing, save it, and activate it to start the Watch action.

Workflow Designer releases it from edit mode and the Vantage [Monitor Service](#) starts the *Watch action* in your workflow, polling the hot folder you specified, searching for new media files to process. A job is started for each new file placed in this folder.

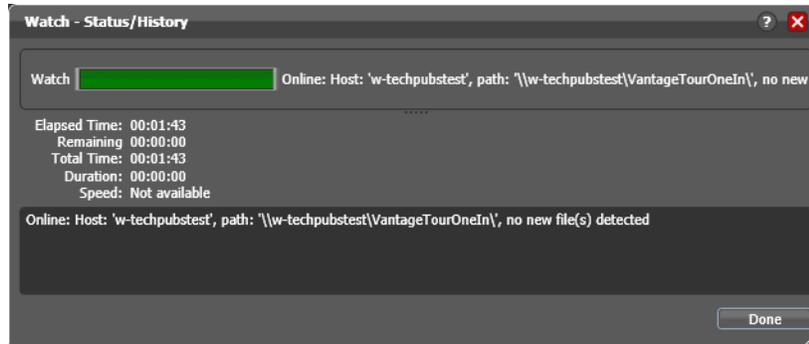
Monitoring your Workflow Status

When you activate a workflow, Workflow Designer automatically displays the Monitor Status workspace to show you the status of all Watch actions. (You can always select any workflow and view its monitor (or job) status, including a record of past jobs.)



- Notice that the [action state](#) of the Watch action is listed as *In Process*, which indicates it has started executing, and it is polling for new files.
- When a new file is discovered, a [job](#) is created that executes the *Simple Transcode* workflow.
- Actions may also be *Waiting*—the state that the transaction enters while Vantage is determining which service should process it. A transaction remains in Waiting state until it is accepted by a service for processing.
- If you deactivate the workflow, the Watch service stops monitoring the [hot folder](#), and the record is saved in the [database](#) for history. When you re-activate the workflow, a new record is added to the list.
- You can double-click the Watch action entry in the table to display more detailed information. You can confirm that it is polling the directory that you specified, and that no new files are detected—or that you’ve made an error in the file path that needs to be fixed, for example.

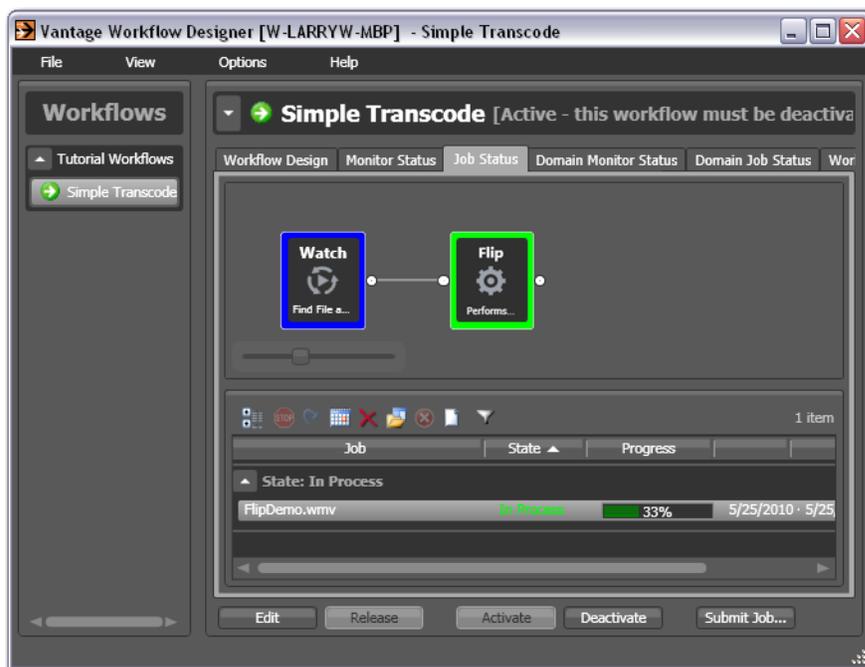
Note: You may have also noticed the Domain Monitor Status workspace—the only difference is one of scope—it displays all of the monitors in the entire domain.



When jobs are started, each action is executed by a corresponding Vantage service, and can be optimized for execution if multiple services (for example, multiple Transcode services) are in your domain.

Now, submit a job by following these steps:

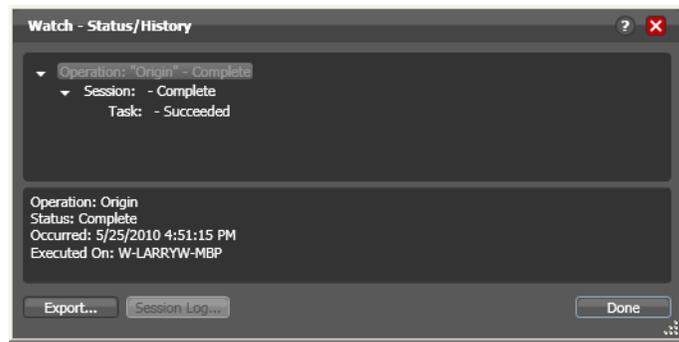
1. Drag a file to your **hot folder** to submit a job. We suggest that you use one of the sample media files provided, which are located at <InstallDrive>:\VantageStore (typically, C:\VantageStore), in an **All-in-one domain**. (If sample media was not installed, just use your own.)
2. Click the Job Status tab to display the Job Status workspace to monitor the status of running jobs.



3. Click on the new job entry in the table, and observe each action change color as the entire job executes each task specified by the actions in the workflow.

Actions display specific border colors to identify each action's state. For example, a yellow border indicates the action hasn't started executing yet. A green border indicates the action is currently executing, and a blue border indicates the action has completed without errors. For a complete list of colors and their meanings, see [Using the Jobs Table](#).

4. Move your mouse over actions in the workflow in the Job Status workspace.
5. Click the Inspector button or just double-click the action to display run-time information about the action in the Status/History window.



6. Click on each succeeding status line in the Status/History window to display details about the [action](#). Close this window when you're done.

When all actions are outlined in blue, the job has completed successfully.

Playing Your New File

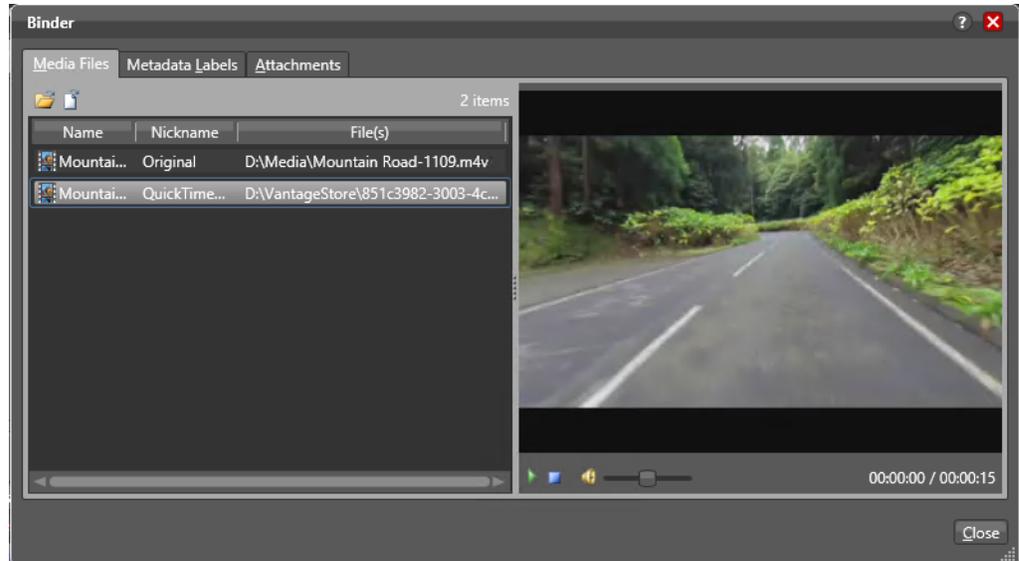
Now that the [job](#) has completed, Vantage has encoded a new QuickTime file.

Note: You didn't configure the [Flip action](#) to tell it where to save new files. So, where are the new files saved? The short answer: unless otherwise specified, new files are written to a Vantage store—a pre-defined directory for storing temporary files.

1. In the Job Status workspace, make sure your job entry is selected in the Jobs table at the bottom.

2. Click on the Binders  button to display the binder for this job.

A binder in Vantage keeps track of the location of media files associated with a job, plus metadata labels and other attachments (files).

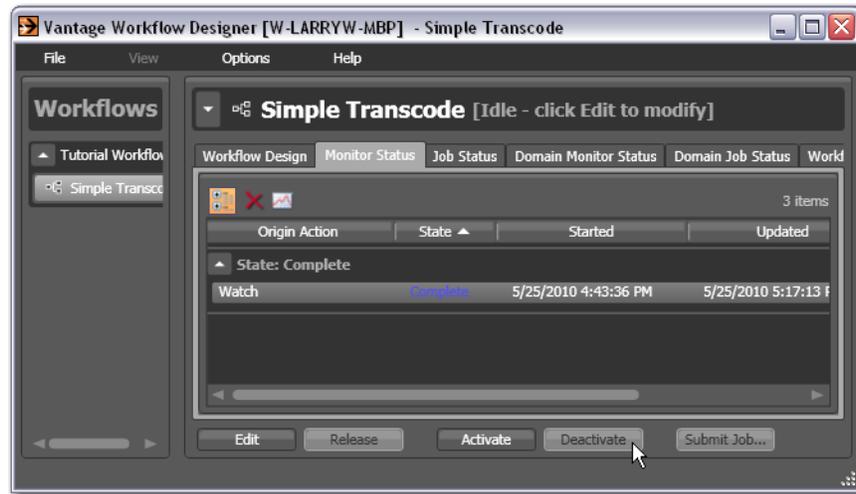


3. Right-click the output file labeled QuickTime H264 AAC. This is the file your workflow transcoded into QuickTime.
4. Click the green Play button in the preview window or double-click the file to open your default video player and play the file.

Deactivating a Workflow

In an upcoming tour, you'll use a copy of this same workflow. You should deactivate this workflow so that you can use the same [hot folder](#) in the next workflow, without the *Simple Transcode* workflow ingesting new media you add to the hot folder.

Select the *Simple Transcode* workflow in the Workflows panel, and click Deactivate at the bottom of the window.



If you want to edit the workflow again, select File > Edit Workflow or click Edit at the bottom of the window. When you're done editing a workflow, you should click Release so that it can be edited or executed by others in the organization.

Conclusion

Congratulations! You've just learned how to automatically submit media to a workflow, monitor its execution, and view the transcoded media file.

In the next tour, you will explore how to use the Workflow Design workspace effectively.

Tour 3: Using the Workflow Design Workspace

Now that you know how to create workflows and submit media, let's take a moment to learn some techniques for using the Workflow Design workspace effectively. This tour takes about 10 minutes.

Some workflows—like *Simple Transcode*—have only a few actions in them; others may have dozens of actions. Sometimes you're working on the big picture of a workflow—laying out actions and connecting them together. Other times, you're working on [action](#) details—configuring the details of a transcode task, for example.

In each case, you may want to zoom in or out, scroll around, or center the work area, to help you focus directly on the work you're performing at the moment.

Types of Workflow Actions

There are many different types of actions you can use to build your workflows, each designed to help you create comprehensive, powerful media processing tools. Here's an overview of major groups and actions.

Monitor—includes actions such as Watch, for ingesting media (or media descriptor) files and starting jobs for the workflow. These monitor directories on a wide variety of computers and media-centric file systems and platforms. The [Workorder action](#) enables batch submission multiple input files to a given workflow.

Traffic—for processing local and regional, and national commercials to on-air or broadcast, including interacting with catch servers. Actions include the [Catch action](#) and [Dublist action](#). These actions are part of TrafficManager.

Live—the Capture action is the origin action; it sets up Vantage to ingest streaming media. This service works only on a Lightspeed Live Capture server.

Cloud—the Cloud action moves media to the Telestream Cloud platform for processing in Cloud-based workflows.

Metadata—includes actions ([Populate action](#) and [Transform action](#)) which allow you to automatically edit and update metadata labels, and transform labels and [attachments](#).

Catalog—includes actions ([Register action](#) and [Exist action](#)) which allow you to register media in Vantage's [catalog](#) for safekeeping and further processing and analysis by other workflows.

Timed Text—Transcodes media while extracting captions or converting a caption or subtitle file.

Transcode—Flip actions includes a broad suite of encoders and codecs, and allow you to encode media on a file-by-file basis.

Analysis—includes a wide variety of actions which allow you to examine video and audio for specific characteristics and metrics, and extract the results for use in building intelligent, adaptable workflows.

Multiscreen—the Multiscreen Flip action allows you to encode adaptive- or multi-bitrate packages such as Apple HLS and MPEG DASH.

IPTV VOD—The IPTV Flip action allows you to encode Transport Stream containing MPEG-1, MPEG-2, H.264 and HEVC (H.265). It uses Manzanita multiplexing technology to give you fine control over Transport Stream creation.

Edit—Includes the actions for [Post Producer](#). The Conform action renders complex editing timelines into output media files, allowing you to automate the production of hundreds of customized outputs. The Compose action allows you to import timelines from editing systems such as Final Cut, Adobe, and Avid.

Transport—includes actions which allow you to copy, move, and delete files, and deploy them to external systems.

Common—utility actions for building complex logical and branching workflows: Compute, Construct, Decide, etc.

There many other categories and actions, as well as third-party actions for interaction with third party systems: Aurora, Signiant, Aspera, and others.

Take time to browse through the groups—open them up, and drag their actions onto the design space and review their [Inspectors](#) to gain a solid understanding of Workflow Designer’s comprehensive workflow building blocks.

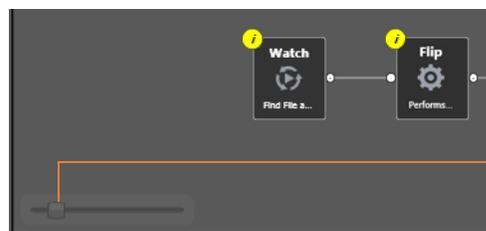
Zooming In and Out on a Workflow

There are three ways to zoom in and out on a workflow:

- Drag the zoom slider bar at the bottom left of the workflow
- Repeatedly press Control+/- (the plus and minus keys)
- Use the scroll wheel on your mouse while pressing the control key.

To zoom a workflow, do the following:

1. If you closed Workflow Designer, open it again, and select the *Simple Transcode* workflow from your category in the Workflows panel (on the left).
2. With your Simple Transcode workflow selected and displayed in the Workflow Design workspace, click Edit at the bottom of the window.
3. Use the zoom slider bar at the bottom left corner to zoom in and out to suit your viewing and editing needs.



Use the zoom slider bar to zoom your workflow in and out.

Moving the Workflow Around in the Workspace

A workflow with many actions may be larger than you can view effectively in your workspace, when viewed at the zoom level you're currently using.

To move the workflow around in the workspace, click and hold anywhere on the workflow canvas (do not click on an action). When the cursor changes to a compass, continue to hold down the mouse button and drag the workflow in the appropriate direction.

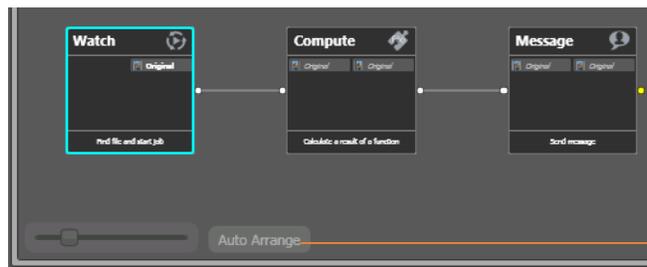
Centering the Workflow in the Workspace

To center the workflow in your workspace, right-click in the workspace and select Recenter Workflow from the context menu. Alternatively, you can press Control-R on the keyboard.

Before you continue, take a few moments to practice zooming, moving, and centering the workflow—you'll use these features frequently, especially as you create larger and more complex workflows. Becoming familiar with them now will make it easier to focus on the design process.

Using Auto Arrange

Use the Auto Arrange feature to assist you in visually optimizing and organizing the layout of actions in your workflow. Auto Arrange automatically moves actions into position for best layout as you place them on the canvas.



Enable or disable Auto Arrange to suit your construction style.

To disable automatic arrangement of actions while you're adjusting actions in a workflow (especially a large one—30 actions or more), click the Auto Arrange button, located at the bottom of the Workflow Design workspace, to toggle it off. While Auto Arrange is off, the Auto Arrange button displays the phrase Auto Arrange SUSPENDED in yellow, and actions will not automatically organize themselves.

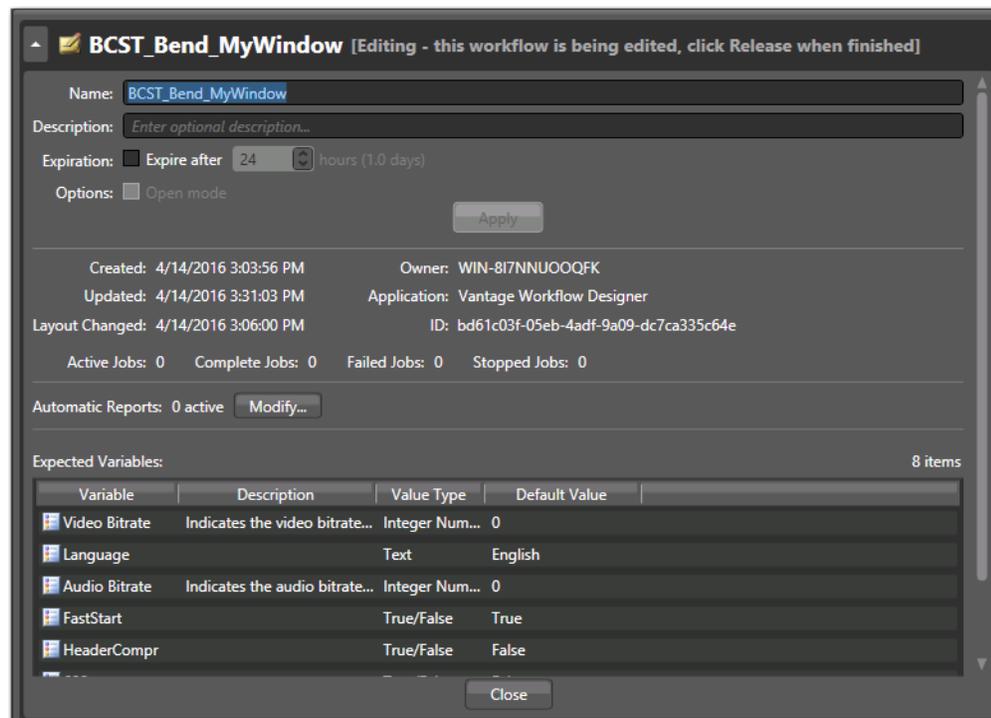
Click the button again to toggle auto arrangement back into effect.

Displaying and Updating Workflow Details

To display or hide a workflow's details panel, do one of the following:

- Select File > Workflow Details panel.
- Click in the Workflow Design workspace's title bar.

When you display the workflow's details panel, Workflow Designer obscures the tabbed workspaces to display details about the workflow.



In the workflow details panel, you can use the following controls to manage the workflow information, including expiration, execution of the workflow in open mode, and automatic report generation.

The information that displays below the Apply button includes creation and modification dates, and job statistics. The Expected Variables list indicates which [variables](#) are being utilized by actions in this workflow. If an [action](#) parameter in the workflow binds to a variable, it displays here.

Conclusion

Congratulations! You've just learned how to use some of the features in the Workflow Design workspace. In the next tour, you will learn how to set up a workflow's transcoding actions to use the settings that you want.

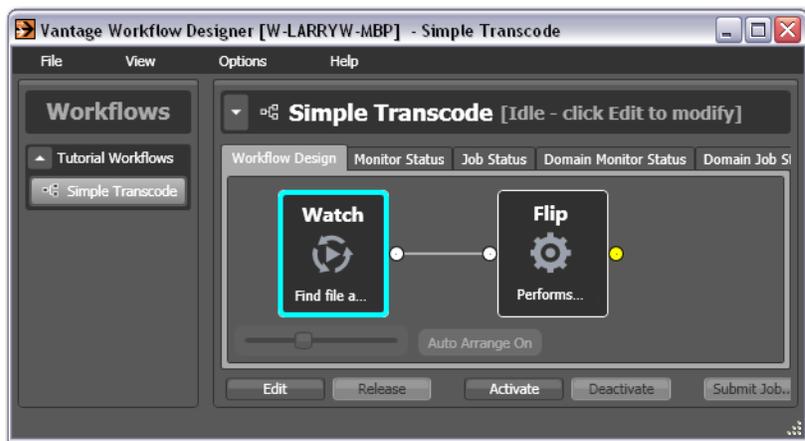
Tour 4: Transcoding Files

This 20-minute tour adds to your workflow design and configuration skills. It's an in-depth look at how effectively Vantage deals with the complexities of media transcoding.

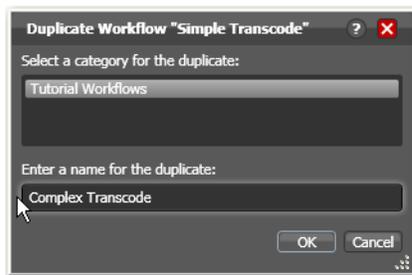
Duplicating a Workflow

It is often easier to duplicate a workflow and make minor modifications to it, rather than starting over with a new one. To duplicate a workflow, do the following:

1. If you quit Workflow Designer after the last tour, start it again. In the Workflows panel, open your Tutorial Workflows category.



2. Select the *Simple Transcode* workflow.
3. Select File > Duplicate Workflow (or right-click and select Duplicate...). Workflow Designer displays the Duplicate Workflow dialog.



4. Name the new workflow *Complex Transcode*. Click OK to create the new workflow and close the dialog.

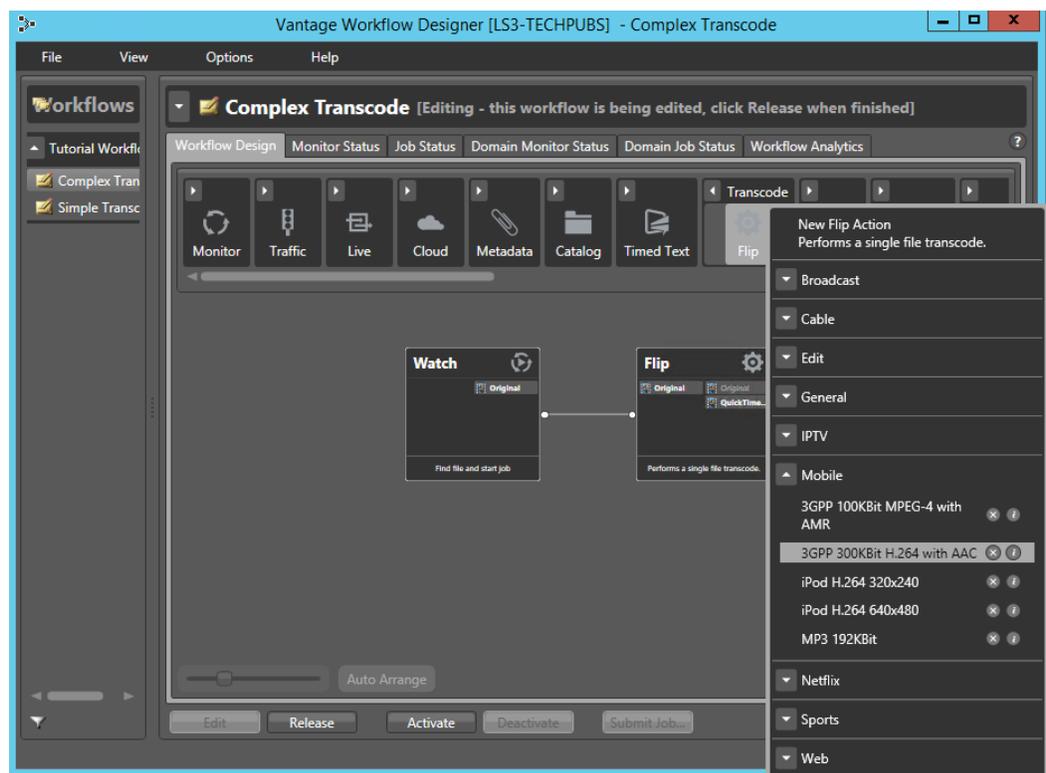
Workflow Designer automatically selects the new workflow, places it in edit mode and displays it in the Workflow Design workspace.

Adding a Branch to a Workflow

Now, let's add a second, *pre-configured* [Flip action](#) to your workflow. Recall that Workflow Designer has many pre-configured actions, making it easier to build workflows.

Let's add this Flip action so that Vantage can encode two separate output files simultaneously, in a single workflow. By creating a branch with parallel Flip actions, each Flip is executed independently as soon as the Watch action completes (making the resources available). This design is more time-efficient than if one Flip action followed the other. Creating branches for parallel encoding is an important part of Vantage scalability and high-volume transcoding. To add a branch, do the following:

1. Open the transcode action group on the action toolbar.
2. Click on the Flip action and select Mobile > 3GPP 300KBit H.264 with AAC preset from the menu to add it to the workflow, as shown here:



3. Connect the new Flip action to the Watch action—click and drag a connector line from the out connect pin (yellow dot) on the right side of the Watch action to the in connect pin (yellow dot on the left side) of the new Flip action—creating a new branch in the workflow.
4. Open the new Flip action's [Inspector](#) and specify an output file nickname to identify the new file you're encoding—*Mobile 3GPP*.
5. Click Save to update the workflow in the [database](#) and close the Inspector.

Writing Output Files to Specific Locations

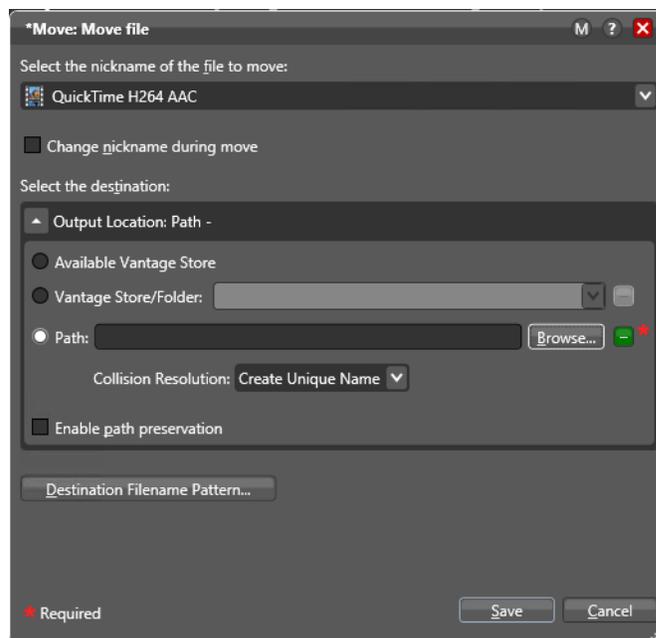
As this workflow is currently designed, newly-encoded media is saved in a Vantage store, because you have not explicitly configured the workflow to place the media in a specific folder. In order to use the new file after the workflow has completed—for example, on a broadcast server or QA server—you need to explicitly move it to a known location on your network.

Let's add a [Move action](#) to each branch, so that the workflow places the new media in a specific folder. Move actions are part of the Transport group, and are file system actions. A Move action actually copies the file to the new location, then deletes the original. (Alternatively, if you want to keep the original file, you can use a Copy action, which places a copy of the file in the new location while keeping the file in the old location.)

Move actions (and other file system actions) utilize a special feature called the Vantage folder address book, which enables you to store output locations, IP addresses, folder names and credentials in a single place. This makes it easier to manage destination locations for files.

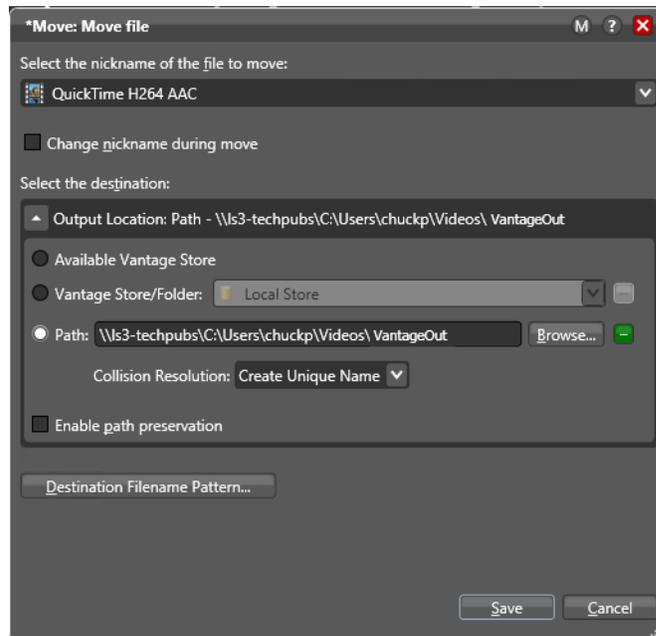
To move the new files:

1. Open the Transport action group on the action toolbar. Drag a Move action onto the QuickTime branch, and another onto the 3GPP branch, connecting each to the Flip action, so that each Move executes after the Flip action.
2. Open the QuickTime branch's Move action [Inspector](#).



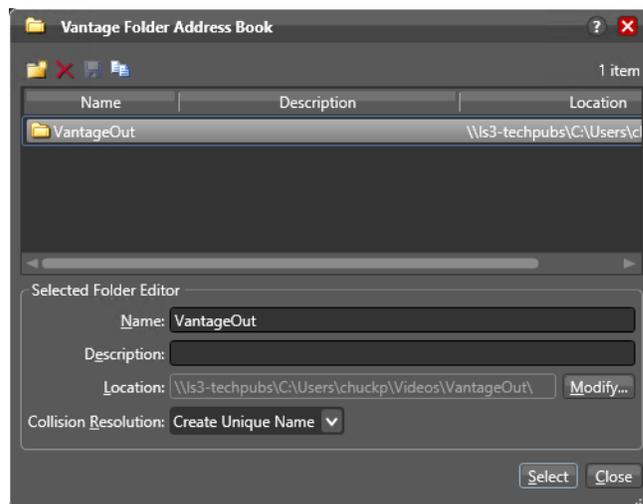
3. Select the *QuickTime H264 AAC* file by nickname, to identify the file to move.

- Click on the browse  button to the right of the Path field. Workflow Designer displays a browse window for selecting the destination folder for the media output. When specifying the path to the file, use a UNC path. A UNC path includes the server name. For example, here's a UNC path, including the server LS3-Techpubs:
`\\ls3-techpubs\C:\Users\chuckp\Videos\
For a discussion of using UNC paths, see Paths for Vantage Storage Overview.`



Vantage Folder Address Book

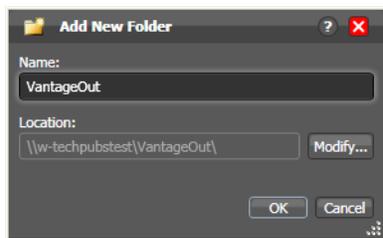
As an alternative to browsing for a path every time, you can create a new Vantage Store in whatever location you like and add it to the Vantage Folder Address Book (shown below). The Address Book contains lists of frequently used Vantage Store addresses.



- Vantage Folder Address Book simplifies directory referencing by allowing you to specify a fully-qualified output location by a simple name.
- Vantage Folder Address Book also allows you to update a path or credentials centrally, and automatically update all actions using that Vantage folder.
- For example, you might have a folder on a given server for HD MPEG2 content: `\\Voyager\SunupCampaign\Darwin\WaitingApproval\HDMPEG2`. You can create a Vantage folder in the address book for this path, and name it *SunupHDWaitingApproval*.
- If you need to change the path or any password associated with the address, you can simply change it in the address book and all actions will automatically update.

To add a destination to the Vantage Folder Address Book:

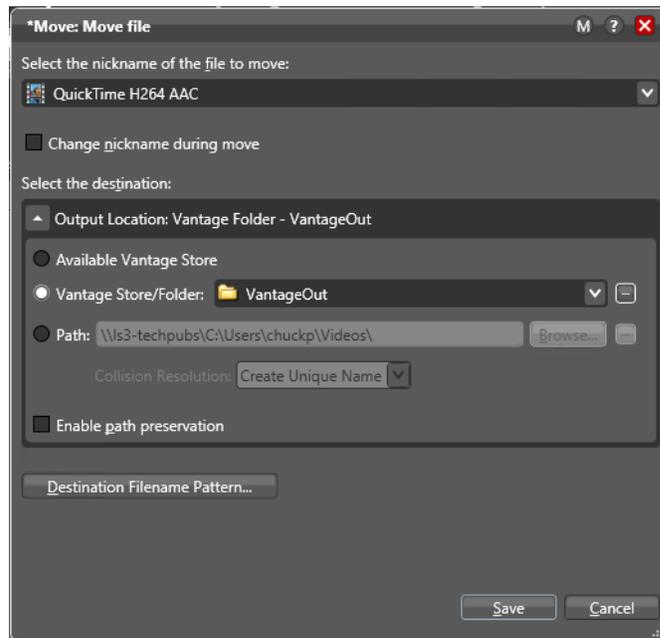
- a. Select the Vantage Store/Folder (middle selection under *Select the destination*).
- b. Click the button at the far right end of the Vantage Store/Folder selection to open the Vantage Folder Address Book.
- c. Create a new Vantage folder—click the Add Folder button in the address book toolbar (the new folder button at far left):



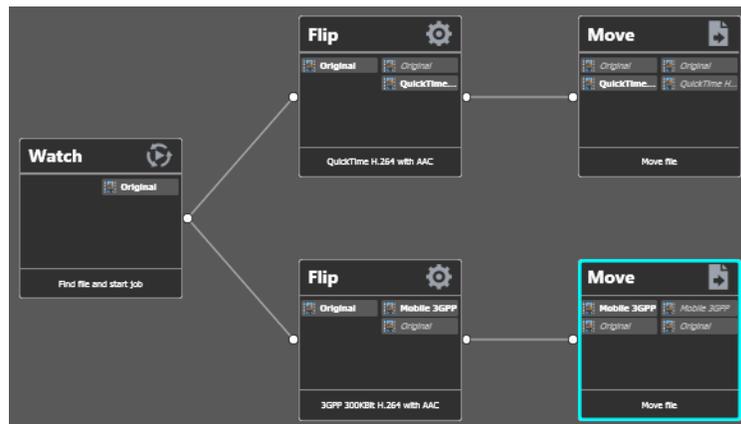
- d. Enter the folder name in the Name text box: `VantageOut`.
- e. Click Modify to specify the directory that this [Vantage folder address](#) points to. Workflow Designer displays the Folder Location Editor.
- f. Choose Windows File System and click Next. (Vantage folders can be defined for any supported file system.)
- g. Click Browse to select a directory (for example, in Windows Explorer make a folder named *VantageOut*) where you want the output media file copied, and

click Select Folder. (Don't use drive letters on a distributed Vantage array or distributed clients—they won't work.)

- h. Click Finish to close the Folder Location Editor dialog. (You may have to click OK on the local folder warning dialog.)
- i. Click OK to add this new Vantage folder and close the Add New Folder dialog.
- j. Click Select to specify this new folder as the destination for the Move action.



- 5. Click Save to save the destination configuration and close the [Inspector](#).
- 6. Repeat the preceding steps for the 3GPP Move action—select the *Mobile 3GPP* nickname for the file you're moving, and select the same destination—*VantageOut*.
 When you're done, your workflow should look like this:



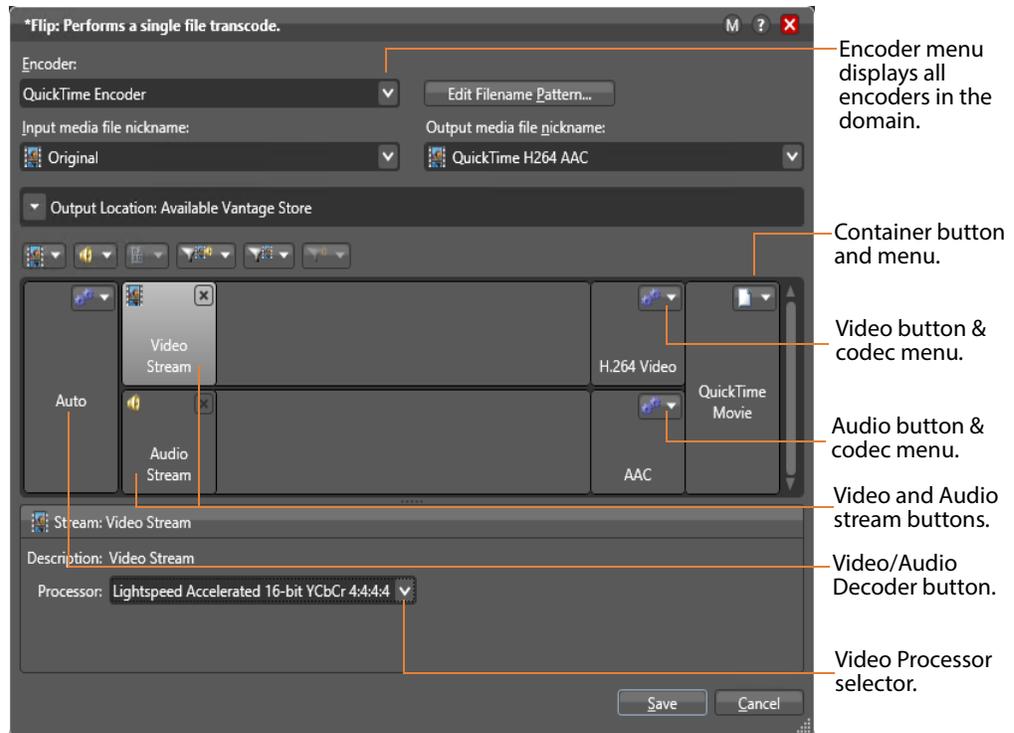
- 7. Activate this workflow.
- 8. Automatically submit a media file to the hot folder for this workflow.

Configuring a Flip Action

Now, let's look at the original QuickTime Flip action that you added in Tour 2 in more detail, and learn how to change Flip action settings.

To change settings in this action, do the following:

1. Click Edit to deactivate the workflow and enter editing mode.
2. Display the Inspector of the QuickTime Flip action.



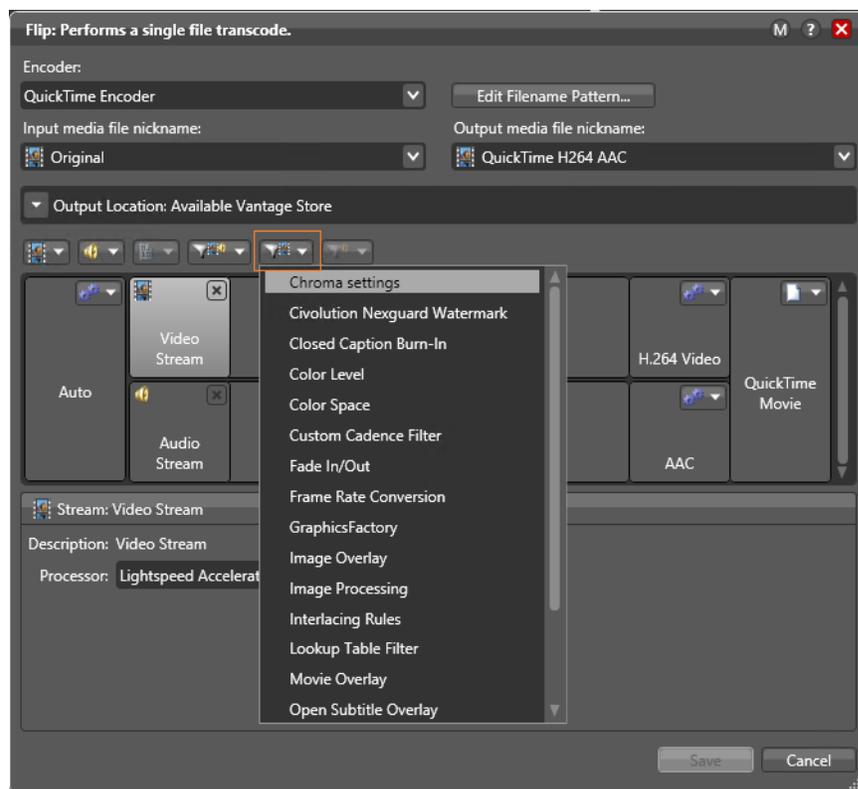
3. Click the Encoder menu to display the list of codecs you can use in the Flip action.
4. Click the Edit Filename Pattern button to control the output file name. By default, Flip actions name the files they create using the same root name as the original file's name plus an appropriate extension, based on the encoder. For example, a QuickTime movie flipped from *FlipDemo.mss* is named *FlipDemo.mov*.
5. Leave the Decoder set for Auto to automatically decode the incoming format.
6. Click on the Video Stream component to display the Processor menu in the details panel below, where you select which video processor to use: Legacy 8-bit RGB, 4:4:4, Multi-core 16-bit YCbCr 4:4:4, or Lightspeed Accelerated 16-bit YCbCr 4:4:4, and others.
7. At the right of the video stream, click the Video Codec menu to display the video codecs that are available. (Click the gear icon to cycle through the selection.)
8. To the right of the audio stream, click the Audio Codec menu to display the audio codecs that are available.

- At the far right of the Video and Audio Stream components, click the Container menu to display the containers that are available (notice that the QuickTime encoder only provides a QuickTime container).

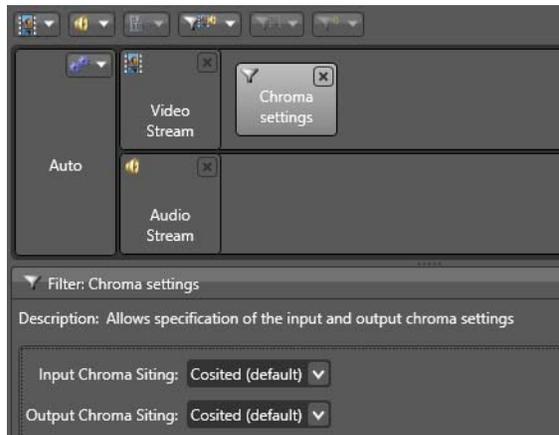
Note: As you click on the video codec, audio codec, and container buttons to select them, configuration details change in the configuration panel at the bottom of the window. For example, the Video Codec configuration panel enables you to set frame width, height, and bitrate for the video in the QuickTime file.

When you select a stream (by clicking the audio or video stream buttons, far left), you can also add processing filters.

- Select the Video Stream button in the toolbar, and then click on the Video Filter menu to display a list of video filters.

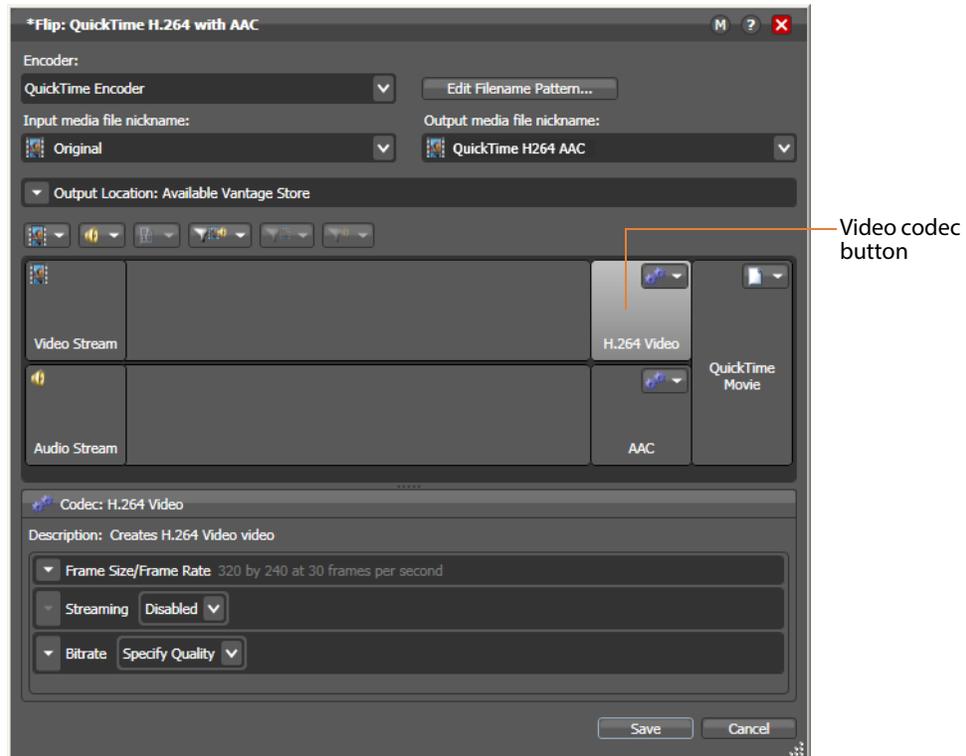


11. Select the Chroma Settings filter. Workflow Designer adds it to the video stream and its controls display in the bottom panel.



Notice that there are other filters for audio and other functions (mouse over them without clicking to see descriptions). These filters are available to provide control over how the transcode operates.

12. Click on the Video Codec at the far right to display the codec settings at the bottom of the window.



13. Click the Frame Size/Frame Rate drop-down arrow to open and view the settings. Notice that you can change the frame width, height, and frame rate.
14. Finally, click the Encoder menu at the top to display the encoders that you can select. (Recall that you can configure a Flip from scratch, or you can select a template—which you did earlier when you added the 3GPP Flip action).
15. Click Cancel to close the Inspector without making any changes.

Conclusion

In this tour, you've learned how to duplicate an existing workflow, how Vantage performs multiple simultaneous encodes, and how to create and use Vantage folder addresses. You've also learned how to configure Flip actions to perform encoding tasks.

Tour 5: Using Nicknames to Identify Files

This tour rounds out your knowledge of nicknames, and how you use them to easily track and process multiple files action by action in a [workflow](#). It takes about 10 or 15 minutes to complete.

Overview

A key feature of Vantage workflows is the notion of *nicknames*. A nickname in Vantage provides a convenient means of referencing a file, using only a word or logical phrase—such as *Original* or *QuickTimeH264AAC*.

- In the context of a workflow, all files are referenced by a nickname which you assign as you either ingest (usually with a Watch or [Associate action](#)) or create a file (for example, with a [Flip action](#)).
- Nicknames are used in every action that creates, accesses, or operates on a file.
- Nicknames provide an brief way to tell an action which logical file it should use to perform a task without fully listing the file path.
- Vantage automatically keeps track of files and their associated nicknames as jobs run.
- Vantage provides a set of default nicknames which can be used in certain types of workflows or to enable certain Vantage features.
- You can also assign your own nicknames which are meaningful in the context of your workflow.
- Nicknames can be used over and over again in multiple workflows because they only have *scope*, or relevance, during the execution of the workflow, and have no context outside the workflow itself.

Note: For some complex media types—such as Omneon reference files or P2 camera files—media is actually a collection of files, all of which are necessary to make the media work. In this case, the nickname refers to the entire collection of media files; Vantage tracks all the video and audio files which comprise the media automatically.

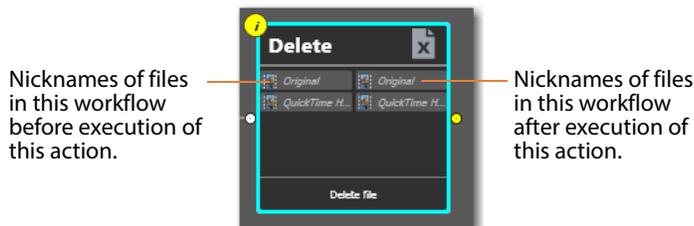
Deleting a File Using its Nickname

To reinforce the notion of using nicknames, let's make one more change to the Complex Transcode workflow. The [Delete action](#) is a file system action which you use to delete a file that is no longer needed, using the nickname of the file. Let's use it to delete the original file that was ingested by the Watch action, at the end of the workflow.

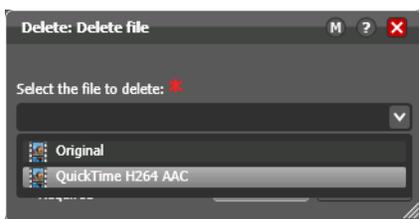
1. Select the *Complex Transcode* workflow—duplicate it as *Complex Transcode Delete*.
2. Open the transport actions group, and click and drag a Delete action into the new workflow, without connecting it to any action. Notice that no nicknames display on this action.

3. Connect the Delete action to the top Move action.

Note: Notice that the nicknames now display on the Delete action. The list on the left are files available before execution; the list on the right are files available after execution. (After configuration, the files used in this action are highlighted.)



4. Open the Delete action Inspector (click the yellow *i* in the top left corner).

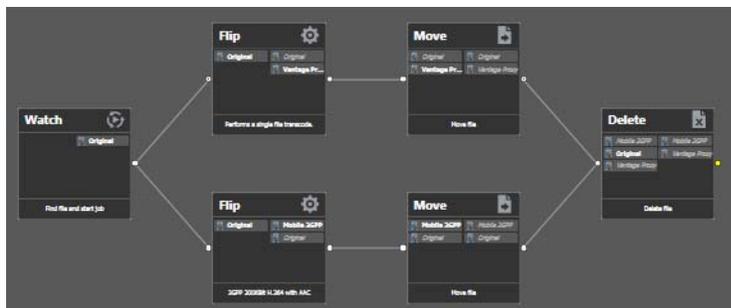


The **Delete action** accepts one parameter: The nickname of the file that you want to delete. This list displays the nicknames of all files in the workflow that it knows of at the moment, based on its connection—*Original* (from Watch) and *QuickTime H264 AAC* (from the connected Flip action).

5. Select *Original* (which identifies the input file) and click Save to close the Inspector.

Workflow Designer immediately highlights the other Flip action's *Original* nickname in red, indicating an error. In this case, you're attempting to delete a file that is being used by the Flip action in the other branch! By using nicknames, Workflow Designer can help you discover many workflow design issues automatically.

6. Connect the Move action to the Delete action to merge the branches, (see below).



When the workflow branches are merged, the **Flip actions** are *synchronized*. As designed, the workflow waits for all upstream workflow branches to complete before executing the first action in the merged branch.

Thus, the Delete action will not execute until both Flip actions have completed. If it executed right after the top Flip action, it might delete the file (or attempt to delete it and fail) before the 2nd Flip had completed.



Also notice that the nicknames on the Delete action have been updated to include the file from the second Flip—Mobile 3GPP.

Tour 6: Processing Attachments in Workflows

This 15-minute tour shows you how you can add [attachment](#) files—files associated with media files—to a workflow, and process them.

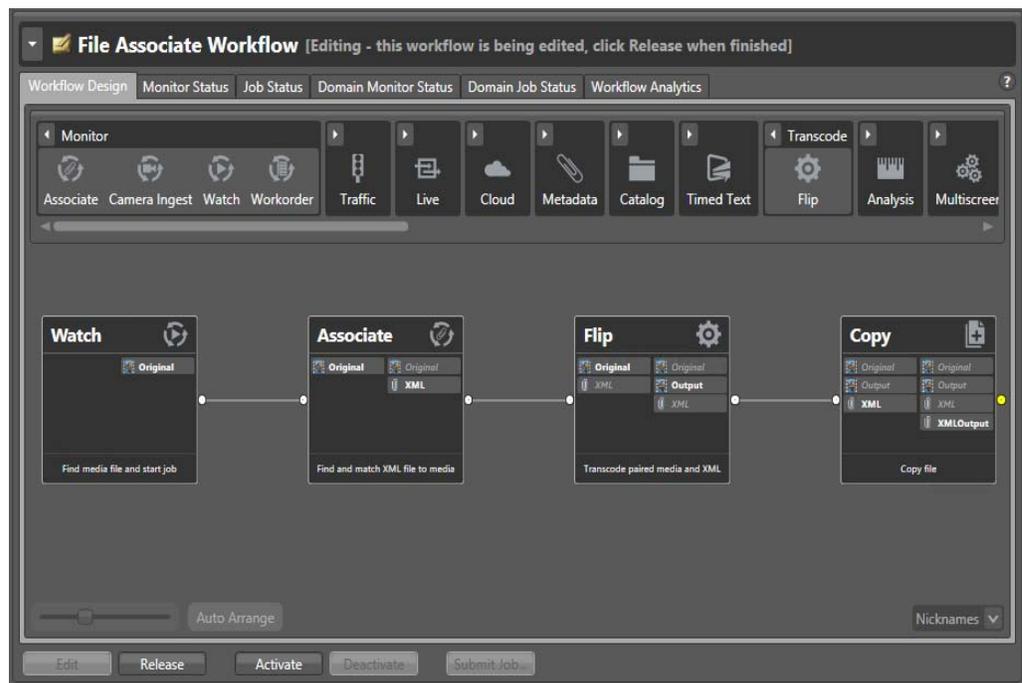
- An attachment might be an XML file, a PDF, DOC, or any other file that needs to be stored with the media file as part of a [job](#) requirement.
- For example, a media file containing a news story might be accompanied by the text of the story with timecode markings in the text for use during video editing.
- The [Associate action](#), which is the subject of this tour, is used to watch [hot folders](#) for general attachment files, just like you use Watch actions to watch for media files.
- The Associate action discovers and pairs the attachment that contains the name of the media file with the media file so they can be processed together.
- Other actions, such as Workorder, Dublist, and Timed Text Flip also process attachments for specific file types.
- Workorder and Dublist are traffic management actions and are explained in the TrafficManager Guide.
- The Timed Text Flip action, which is used to add captions from an SCC or STL file to a media file, is covered in an application note on our web site.

The following simple example shows how to associate an XML file to a media file so the two can be processed together during and after transcoding.

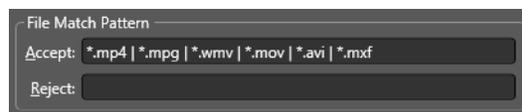
File Associate Workflow Description

Follow these steps to associate an XML file with a media file:

1. Launch Workflow Designer.
2. Create the workflow shown below, using Watch, Associate, Flip, and Copy actions. Name it *File Associate*.



1. Click the inspector button  on the Watch action and configure it to monitor a folder for incoming media files. If you need help, see Tour 1, [Configuring the Watch Action](#).
2. If you expect to receive media files and attachments in the same folder, you will need to set up the File Match Pattern in the Inspector for the types of media files you expect. This enables Vantage to recognize the difference between media files and attachments. See the figure below or hover the cursor over the Accept field for instructions. The File Match Pattern is set to accept only files with names matching the pattern `*.[EXTENSION]` where `*` is a wildcard representing any file name.



3. Click the inspector button  on the [Associate action](#) (or just double-click on the action itself) to open the [Inspector](#). The Inspector opens in read only mode. On the first panel, note that Attachments is selected. (You can select other media files, but you cannot transcode them when ingested by an [Associate action](#).)

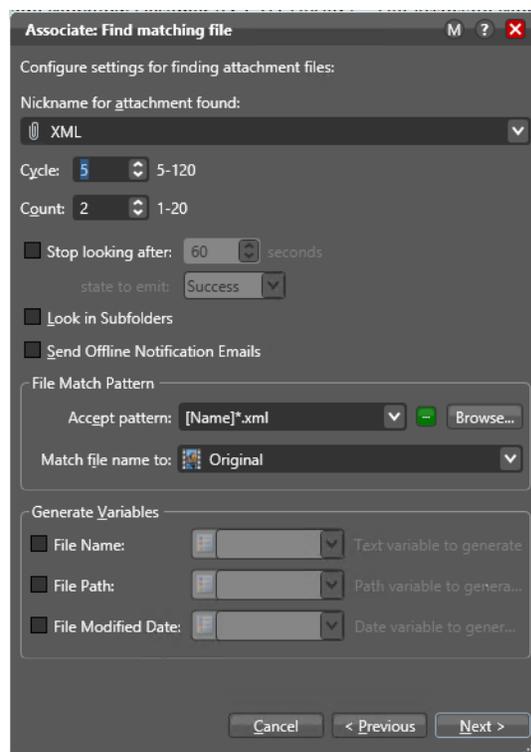
4. Click Next two more times to view the second and third Inspector panels.

As in the Watch Inspector, these panels allow you to select the file system (select Windows) and specify the folder to watch for attachment files. Note that this can be the same folder being watched for media files or a different folder.

5. Click Next to view the fourth Inspector panel (below).

In this panel the incoming attachment file is assigned the nickname *XML*. Notice also that the File Match Pattern is set to accept only files with names matching the pattern `[NAME]*.xml`.

Additionally, the Match file name is set to *Original*—the nickname of the matching media file ingested by the Watch action that started the [job](#). These settings ensure that only XML attachment files with a root name that matches the media file name will be accepted.



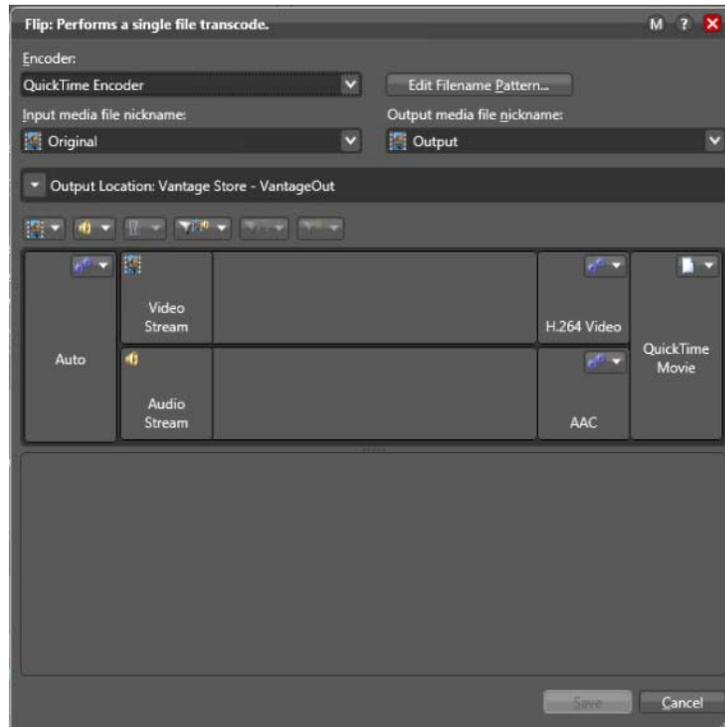
6. Click Next and Cancel to close the Associate Inspector.

7. Click the **Flip action** inspector  to open it.

On the open Inspector panel, set the Encoder for the type of media file, nickname the Input media file *Original*, and nickname the output media file *Output*. The specified output location is *VantageOut*--the store you created in previous tours.

Click on each of the selections in the middle area to see the many transcoding and filtering options available, and also notice the additional parameters at the bottom of the panel that change with each selection in the middle area.

Click **Save** to save your changes and close the Inspector.



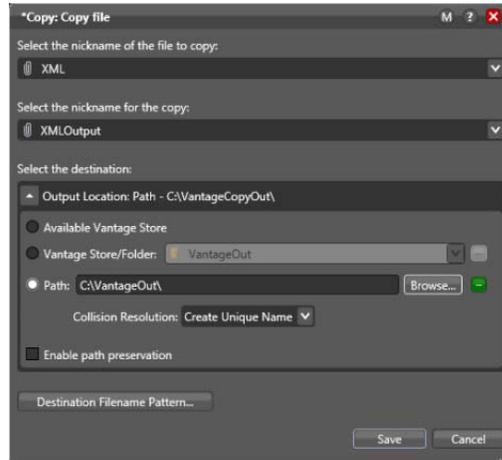
8. Click the Copy action Inspector to open it.

In the *Select the nickname of the file to copy* menu, select *XML*.

In the *Select the nickname for the copy* menu, enter *XMLOutput*.

In the *Select the destination* menu, select *Vantage Store/Folder: VantageOut*.

Click *Save* to save your changes and close the Inspector.

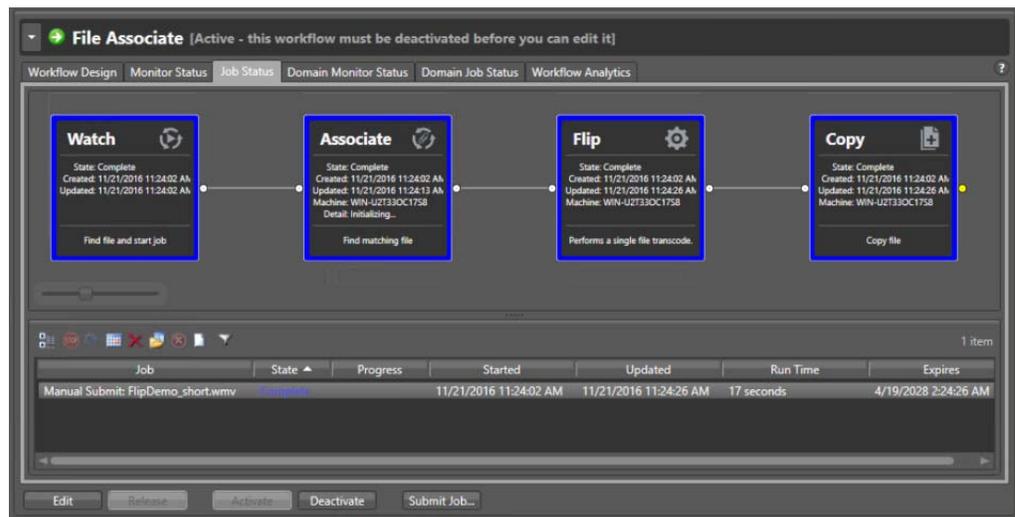


This action will copy the XMLOutput file into the same VantageOut store location as the transcoded media file.

Running the Attachment Workflow

Now it's time to test the workflow:

1. Locate or create a media file and a matching XML file. For testing, you can create a text file with the same name as the media file and change the file extension to *xml*. Ensure that the files are named identically except for the extension.
2. Activate the workflow, and drop the media file and matching XML file into the Watch folder, or if they are already in the folder, use Submit Job in the Workflow Design window to start a job by selecting the media file.
3. Click on the Job Status tab and select the job to watch it execute (below).

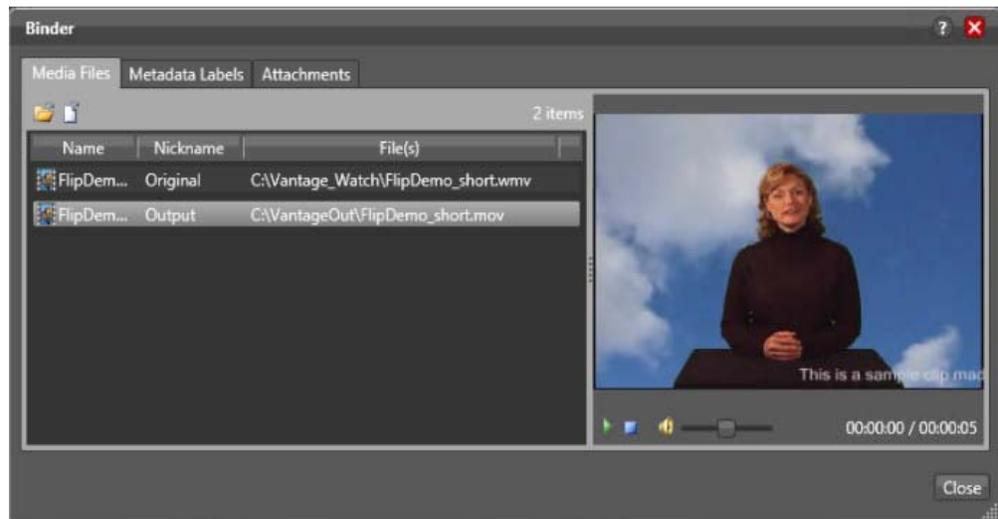


4. Double click the job in the Job Status table to open the binder.

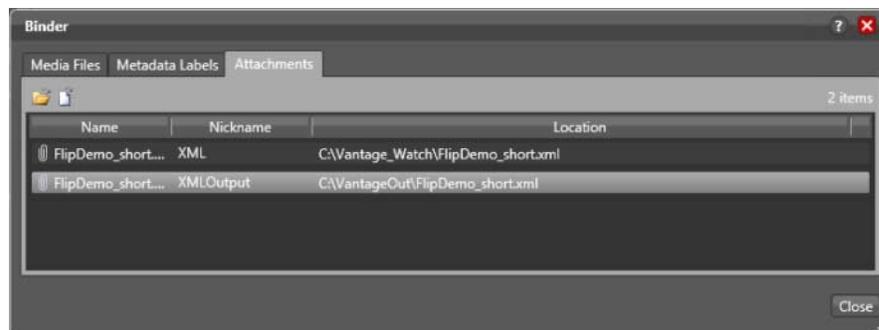
The concept of a binder is used to identify and group together all the files belonging to a particular job. Notice that the binder Media Files tab lists the Original and Output media files, both of which were used in this particular job.

You can select the output file and play it in the binder's preview player by clicking the green play button.

Since a binder is a temporary collection of the files used in a job, when you delete the job, the binder is deleted also. (Binders are saved by using a Register action to register the binder into a Vantage catalog, as explained in a later tour.)



5. Click the binder Attachments tab and notice that the XML and XMLOutput files are listed.



6. Right-click the XMLOutput file in the binder, and select Open Containing Folder to see the Output media file and its matching XML file in the VantageOut folder.
 The Flip action placed the Output media file in the VantageOut folder, and the Copy action copied the XMLOutput file there also.
7. Deactivate the workflow when you're finished.

Conclusion

In this tour, you learned about the following:

- Using a Watch action to discover a media file.
- Using an [Associate action](#) to discover an attachment file associated with the media files found by the Watch action.
- Using a Flip action to transcode the media file and place it in an output folder.
- Using a Copy action to copy the matching attachment file to the same output folder as the matching media file.

Using these principles, you can associate any file with a media file having a matching name, and keep the two of them together throughout the workflow, including using a Copy action to send the attachment to the same output folder or destination as the transcoded media file. Note that you can also use other Transport actions, such as Move and Deploy to place files in other desired locations.

Tour 7a: Using Catalogs and Binders in Ingest Workflows

In the last tour, we touched on catalogs and binders. You saw that when you view a completed workflow in the Job Status panel, you can double-click the job listed in the table to see the binder and the files that it includes.

This tour introduces you to the concept of [catalogs](#) as an organizing principle for binders in Vantage. As you take the tour, you will create a catalog and a workflow to ingest media, create thumbnail and proxy files from the Original, and register all three in the catalog. These items—catalog, binder, original, thumbnail, and proxy are all needed in order to manually manage video projects using the Vantage Workflow Portal. Using the Portal, operators can make changes to the video and audio and then manually submit the media to another downstream workflow for transcoding and deployment.

The workflows and configuration files for both tours are available for download from the Telestream web site. Search the web site and download the General Workflows zip file. Extract the workflows from the file and import the workflows listed below:

- [Tour 7a: Using Catalogs and Binders in Ingest Workflows](#) covers creating catalogs and the ingest workflow to create an original, thumbnail, and proxy. Use the workflow named *Ingest to Catalog.xml*, or you can create the workflow following the steps provided.
- [Tour 7b: The Workflow Portal and Trim Workflow](#) describes a downstream workflow for transcoding and deploying files submitted to it from the Workflow Portal, which is the operator's tool for video monitoring and management. Use the workflow named *Trim from Catalog.xml* and the Workflow Portal configuration file named *Trimming Workflow Portal Configuration.xml* or you can create the workflow and portal configuration using the steps provided.

To import workflows using the Workflow Designer, select File > Import Workflows... and select the workflow XML file. The workflow will appear in the left panel Workflows list.

To import a Workflow Portal configuration, open the Vantage Management Console, select Application Configurations > Workflow Portal, and use the blue Import down-arrow button above the Configuration window to import the XML configuration file.

Overview

A *binder* is a collection of file and metadata information, created for each job that Vantage executes. Each binder contains media and [attachment](#) file references and metadata labels that were ingested or created during the [job](#). Binders allow files to be preserved (for access and further processing within Vantage) after the job completes.

Binders are not file folders—and are not part of the Windows file system—they are records in the Vantage [database](#). Thus, binders do not contain media or attachment files; they only identify the paths to these files.

Catalogs help you organize binders. Catalogs are created in the Management Console. You can create binder expiration policies to help manage media, and catalogs can optionally be transient—that is, they can be automatically deleted when all of the binders have been removed and the catalog is empty.

You use the Register action in a workflow to add binders to a catalog, and you use the Exist action to determine if a specific binder has already been added to a catalog. Binder names usually match the name of the file that started the job. Binders that are not explicitly registered are accessible to users only in Workflow Designer, in the Job Status workspaces, and if the job is deleted, the binder is deleted also.

Binders that have been registered are accessible by operators using Workflow Portal. Binders remain in a catalog until deleted manually or by expiration policies you set up.

Note: For management purposes, you can also view binders in the Vantage [Management Console](#), and manually create them there—or delete them, but the Management Console is not designed to manage binders for production purposes.

Ingesting Media

For the purpose of this tour, let's examine a typical application of Vantage--to ingest media clips and register them into a catalog so that they can be processed downstream. Once media is prepared in this way, the catalog and binder can be passed on to operators who are responsible for examining the clips and preparing them for editing or broadcast.

To ingest and register clips into Vantage catalogs, we'll create the following components:

Trim Catalog—this [catalog](#) is intended to store binders created by a file ingest workflow. Catalogs are created using the [Management Console](#).

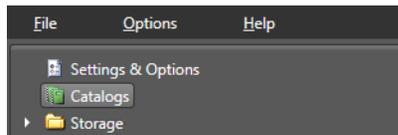
Trimming Label—this label creates placeholders for information about the video that is filled in when the media is ingested and which can then be modified by operators using the Workflow Portal

Ingest to Catalog Workflow—ingests files and registers them in the Default Catalog.

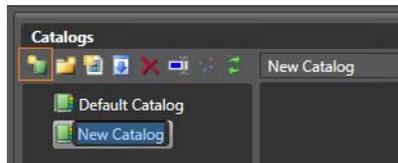
Creating a Catalog and Label

Catalogs are created using the Vantage Management Console.

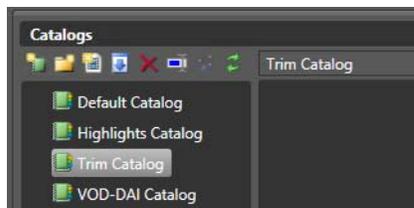
1. Launch the Vantage Management Console from the desktop icon.
2. Click *Catalogs* near the top of the list in the left panel.



3. Click the *New Catalog* icon to create a new catalog.



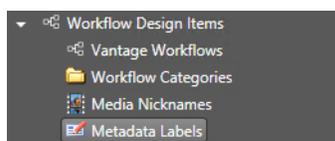
4. Type over the existing name to change it from New Catalog to Trim Catalog.



This completes catalog creation.

Next, to make a Metadata Label, keep the Vantage Management Console open:

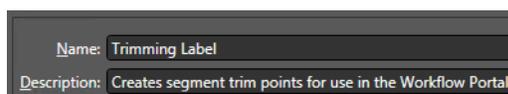
1. Select *Workflow Design Items > Metadata Labels* in the left column.



2. Select *Create a new Metadata Label* in the right Metadata Labels panel.



3. Name the label *Trimming Label*, and save it (blue floppy disk icon). Labels hold metadata that can be modified in the Workflow Portal and submitted to a workflow.



4. In the Design section of the Trimming Label, use the New Parameter button to add these new parameters to the label and set the Value Type of each to *Timecode*:

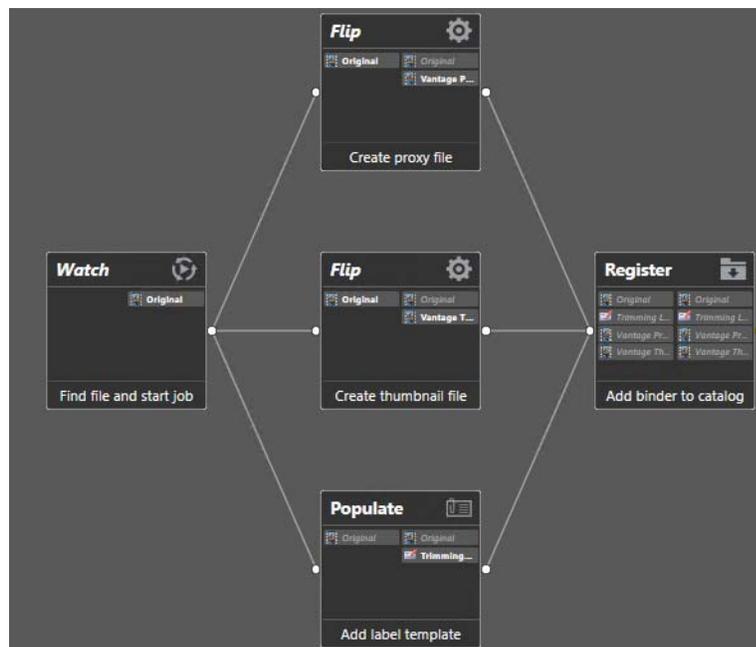
- Trim Group X IN
- Trim Group X OUT
- Trim Group X DURATION

You can also add a description to each parameter, if you like, such as “Enter Start/End/Duration timecode here”.

This completes catalog and label creation. Later, in the workflow for this tour, you will register binders and metadata labels into the catalog using an ingest workflow.

The Ingest Workflow

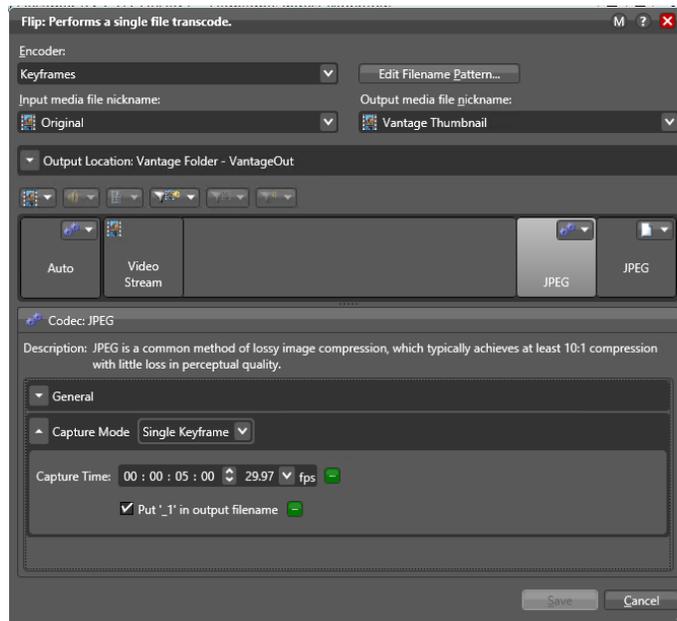
In this typical ingest workflow, the Watch action monitors a [hot folder](#) for incoming clips. Set up the Watch action as described in previous tours to monitor a folder, discover the type of media file you want to detect, and nickname it Original.



Thumbnail Flip

The center **Flip action** creates a JPEG thumbnail media file by capturing a single video frame from the Original video source:

- Encoder: Keyframes
- Input nickname: Original
- Output nickname: Vantage Thumbnail
- Select an Output Location

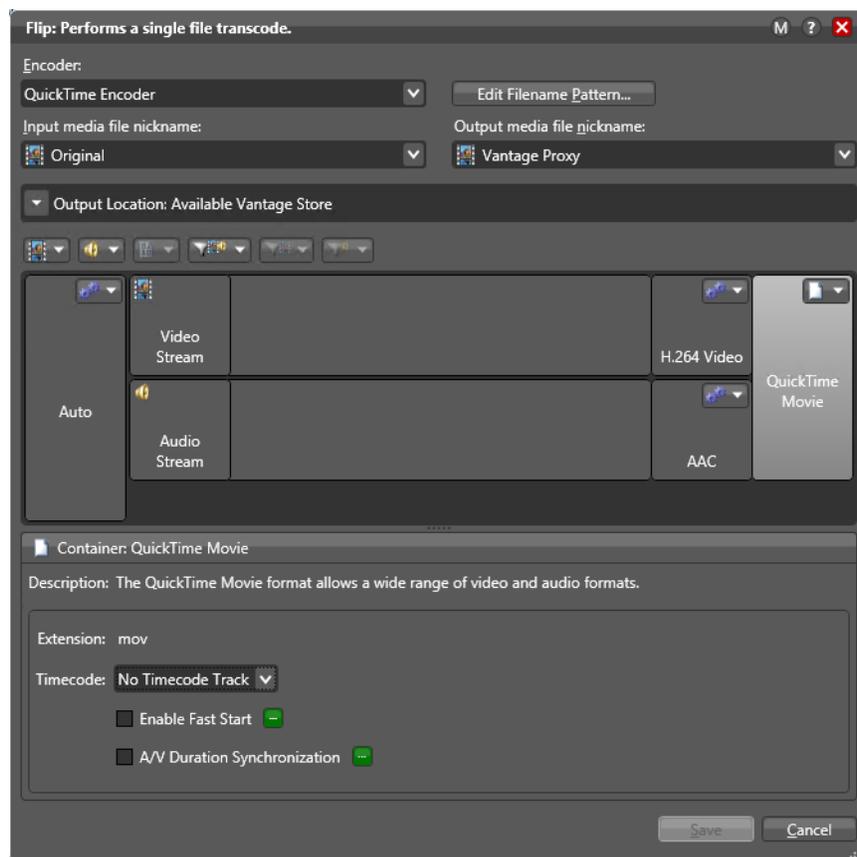


Proxy Flip

The top **Flip action** creates a proxy for previewing and editing:

- Encoder: QuickTime Encoder
- Input nickname: Original
- Output nickname: Vantage Proxy
- Select an Output Location

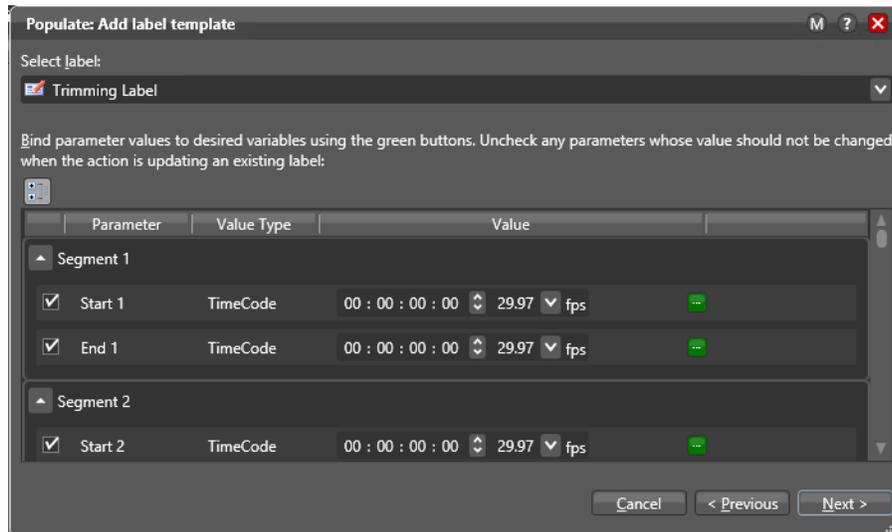
This produces a 720 x 480, 29.97 H.264/AAC QuickTime movie encoded using the QuickTime encoder, with the required nickname of Vantage Proxy to allow playing in the preview player and the Workflow Portal.



Populate Action Creates Label with Timecode

The [Populate action](#) creates a Trimming Label, with begin and end timecodes for multiple segments of video.

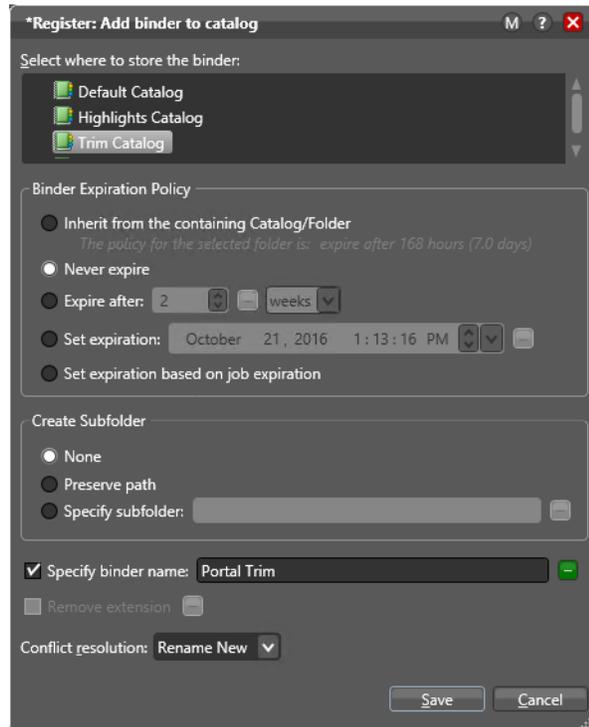
- Select Label from Variable
- Select Trimming Label



Be sure to check the segments that you will use for your trimming label after the Trimming Label is selected.

Register Binders into Catalogs

The [Register action](#) registers the [binders](#) produced by this workflow into the Trim Catalog, so that the assets can be accessed and processed by an operator, using the Workflow Portal. The Register action ensures that the binder created by the job will exist after the job expires.



Running the Catalog Workflow

Now we're ready to run the workflow:

1. Locate or create a media file for testing. If you are using the sample workflows from the Telestream.net web site, use the Demo.mp4 file supplied with the workflows.
2. Activate the workflow, and drop the media file into the Watch folder, or if it is already in the folder, use Submit Job in the Workflow Design window to start a job.
3. Click on the Job Status tab and select the job to watch it execute (below).
4. Double-click the job in the Job Status table to open the binder. In the binder Media Files panel, you should see an Original, a thumbnail, and a proxy. In the Metadata Labels panel, you should see the Trimming Label with parameters for multiple segments of video. This shows that the binder was created.
5. Open the Vantage Management Console, click on Catalogs, and click on the Trim Catalog. In the Media Files panel, you should see the same binder as in the previous step with the Original, Vantage Thumbnail, and Vantage Proxy, and you should see the same Trimming Label in the Metadata Labels panel. This shows that the binder was added to the catalog.

Conclusion

In this tour, you've created a catalog, a metadata label, and an ingest workflow. The workflow checks the video, makes a thumbnail and proxy, and registers the binder containing the original, thumbnail, and proxy into the catalog. These are the elements that need to be present in a typical ingest workflow that produces files to be monitored and managed using the Workflow Portal.

Next, this tour continues with the second half of the process—another workflow processes the video by trimming segments to the desired lengths. The operator sets the segment lengths by playing and adjusting the timecode in each segment in the Workflow Portal and then submits the marked video to a production workflow, which actually trims the segments to the desired lengths. See [Tour 7b: The Workflow Portal and Trim Workflow](#).

Tour 7b: The Workflow Portal and Trim Workflow

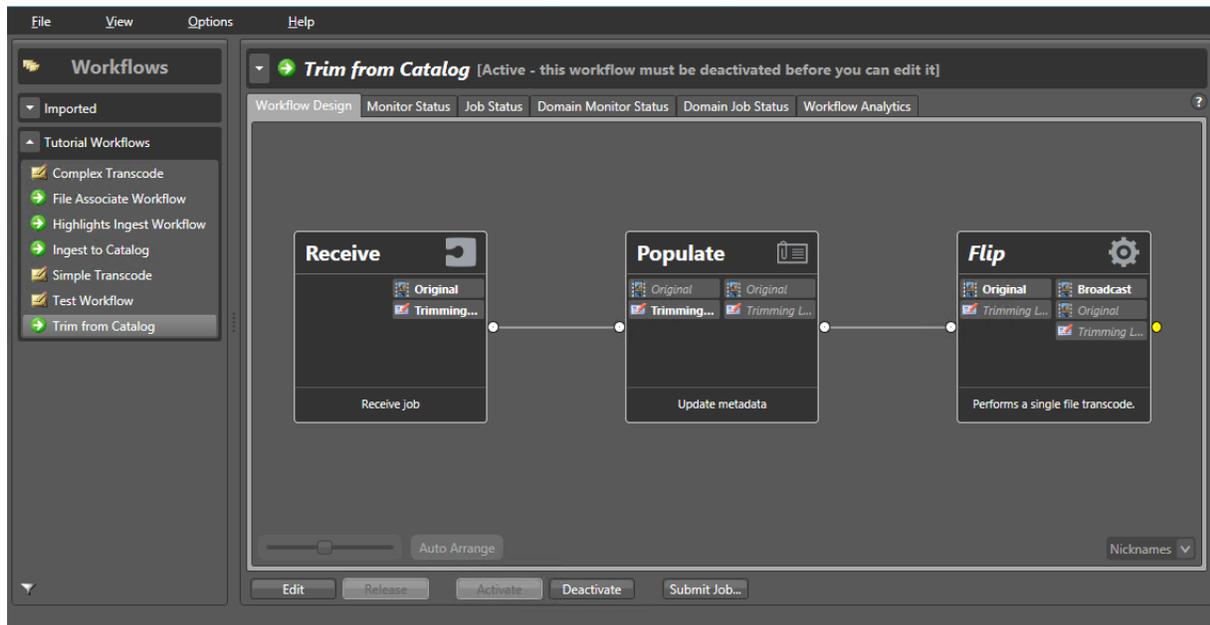
In the second half of Tour 7, you will submit the catalog, binder, and label created in the *Ingest to Catalog* workflow to a *Trim from Catalog* production workflow. The resulting output will be a trimmed media file. You can import both workflows and even a media sample from the General Workflows samples provided on the Telestream web site.

To submit to the production workflow, you will use the Vantage Workflow Portal application. The Portal is an operator’s application allowing manual monitoring and adjustment of ingested video and manual submission to downstream workflows.

The Production Workflow

In the Trim from Catalog example production workflow, the Watch action is replaced by a [Receive action](#), because this workflow only executes when media is submitted to it by an operator using the Workflow Portal. A Receive action is required when submitting media to a workflow from another application, such as the Workflow Portal.

Figure 1. Trim from Catalog Production Workflow



The Populate action converts the Trimming Label into variables for use in the workflow. Variables are covered in a later tour.

Next, a Flip action executes the trim process on the Original media. The action uses the Media Trim movie filter and the begin and end timecode variables to trim the clip, and convert it into an MPEG-2 program stream. An operator enters timecode for the trim points using the Workflow Portal before submitting the media to the workflow.

The Workflow Portal Configuration

Now that we understand the functionality of the production workflow, let's briefly review the Workflow Portal configuration required to take the output of the first workflow and submit it to the second workflow.

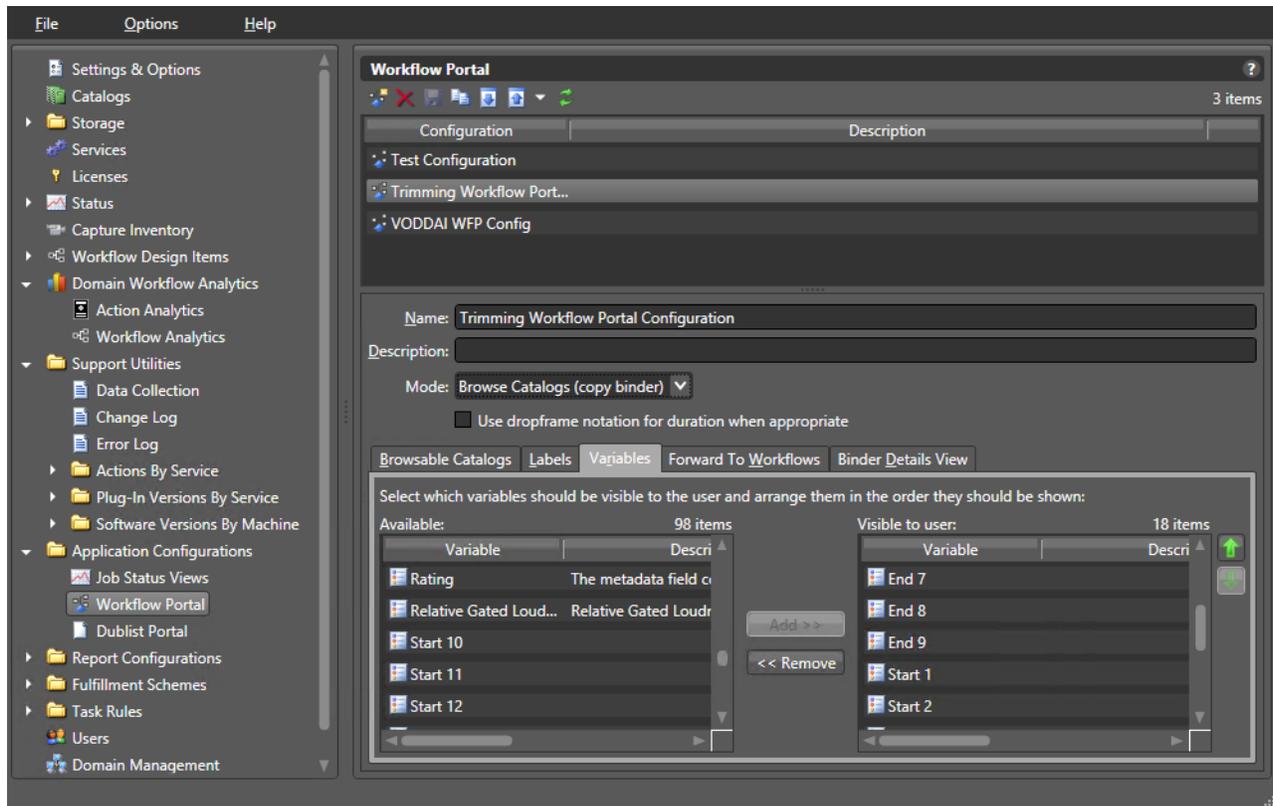
You can import this configuration (*Trimming Workflow Portal Configuration.xml*) from the General Workflows samples available by searching the Telestream web site, or you can create the workflow and portal configuration using the steps provided. To import the configuration using the Vantage Management Console, select Application Configurations > Workflow Portal > blue *Import* down-arrow button.

Workflow Portal Overview and Configuration

The *Workflow Portal* is a client program that can be customized to enable operators to manually modify media, metadata, and variables and submit them to workflows.

Customization is implemented in the Vantage [Management Console](#), where Vantage administrators select user interface features and save them as a Workflow Portal configuration. Multiple configurations can be created for different operator tasks.

When operators launch the Workflow Portal, they select the configuration appropriate to the task at hand, and Workflow Portal dynamically implements the user interface specified in the configuration file, and provides access to the specified workflows, categories, and functions—specifications which are all part of the configuration.



In this configuration, the mode is set to Browse Catalogs (Copy Binder). In this mode, when you submit a catalog and binder to the production workflow, the binder is duplicated when submitted—leaving the original binder intact in its original catalog.

If you set the mode to Forward Binder instead of Copy Binder, the original binder from the original catalog is forwarded to the production workflow when a job is submitted, which may alter the files in the binder.

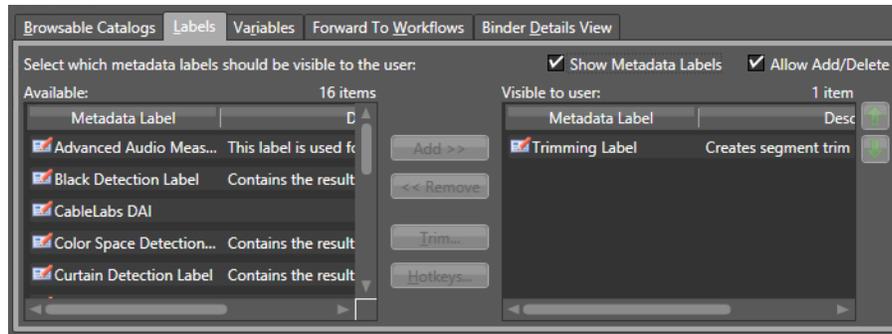
If you don't know which mode to use, Copy Binder is the safest choice, since it preserves your original catalog and binder. If you need to delete the binder later to prevent unneeded files from accumulating, you can do so manually or automatically by setting an expiration date for the binder.

Specifying the Catalog to Use

At the bottom of the configuration panel, note that (in the Browsable Catalogs tab) the [catalog](#) selected is the Trim Catalog. The catalog you specify here must be the same as the catalog where media is being registered by the Ingest to Catalog workflow.

Specifying the Label to Use

As shown below in the Labels tab, select the Trimming Label and use the center buttons to move it to the right panel to specify the label to use in the portal. The Trimming Label is already in the Visible to user column if you imported the sample workflow and configuration.

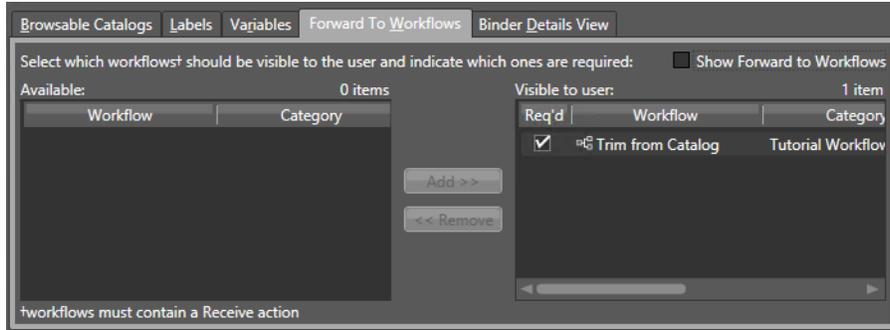


Specifying the Variables to Use

No variables are required because the workflows were designed to store the job values in a label. As an alternative, you could create variables and have the operator work directly with them if you wanted to. Variables are covered in a later tutorial.

Specifying the Workflow to Use

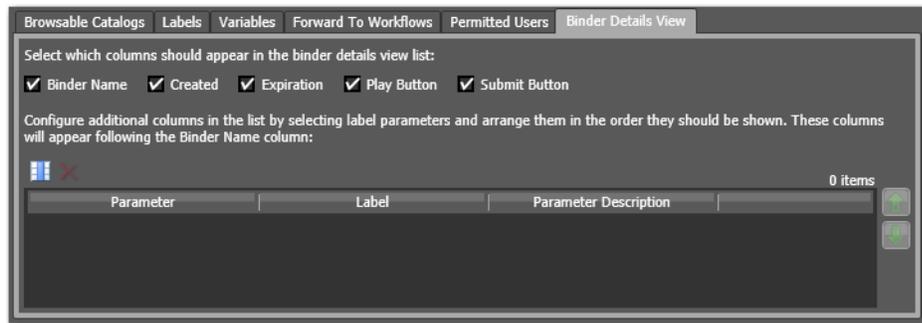
As shown below in the Workflows tab, the operator can submit workflows to the Trim from Catalog production workflow, and it is required (checked).



This workflow must be activated in Workflow Designer in order to receive jobs after the operator has submitted them.

Specifying the Binder Details to Display

As shown below in the Binder Details View tab, the operator can view certain information and Workflow Portal controls.



All of the [binder](#) columns are displayed for the operator, plus the video Play button—so that the operator can scrub the video for in and out points and the keyframe timecode. The Submit button enables the operator to submit the media to the Trim from Catalog production workflow after updating all of the metadata.

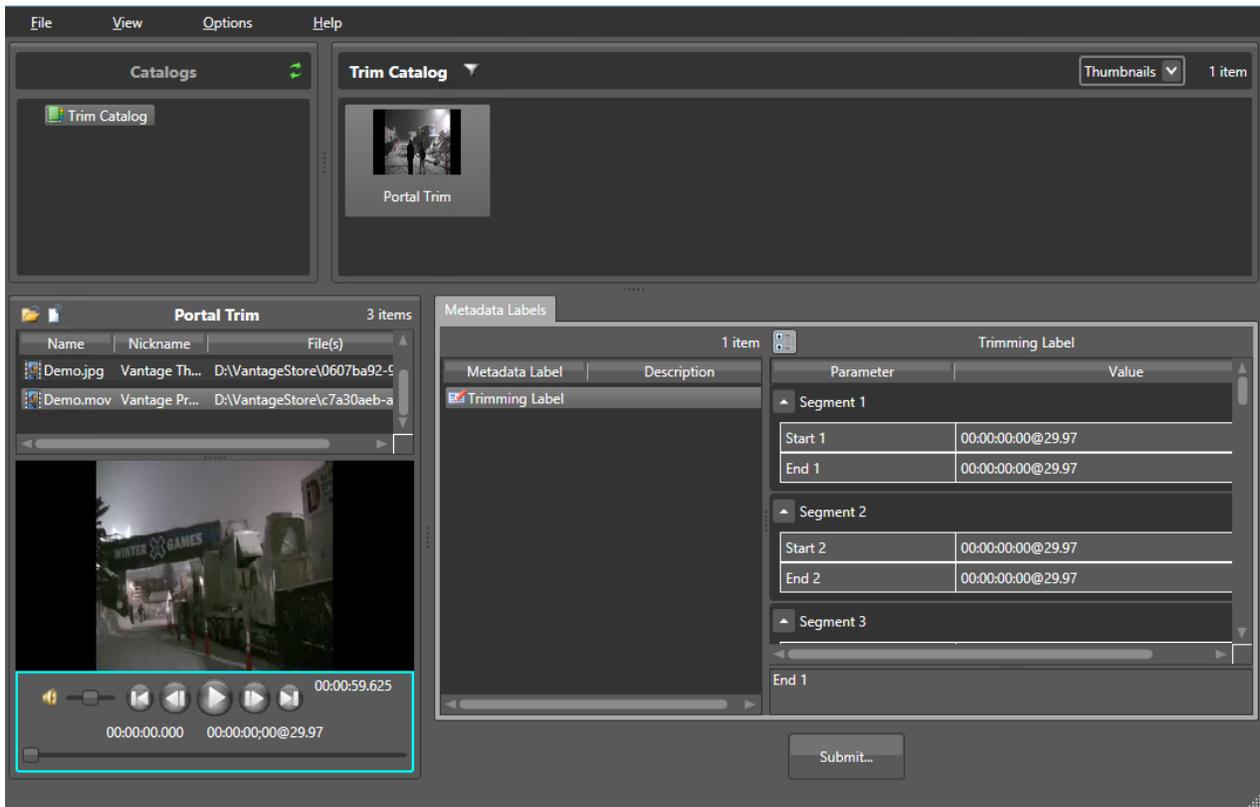
Be sure to save the Workflow Portal configuration (blue floppy disk icon) when you are finished configuring it.

When you are finished configuring and you have run the ingest workflow to create and register the binder, you are ready to use the Workflow Portal.

Follow this procedure to access and operate the Workflow Portal:

1. Double-click the Workflow Portal desktop icon to start the application.
2. When you open the portal for the first time, it asks you to load the Configuration file you created previously, or select File > Change Reload Application Configuration.
3. Click on the Trim Catalog in the upper left quadrant of the Workflow Portal, and click on the clip you intend to modify in the Trim Catalog clip list.

The Workflow Portal should look like this.



4. Click Submit at the bottom to open the Trimming Label parameters for editing.
5. Select and play the proxy video in the lower left quadrant to identify the trim points you want to use.
6. Manually enter the timecode values for each segment in the Trimming Label, or use the Mark buttons. To manually enter timecodes, click on the start and end timecodes and type the timecode values.
7. Click Submit and select the Trim from Catalog workflow. This will send the binder and trim label to the workflow for processing to trim the actual media.

Conclusion

In this tour, you learned that catalogs are used to register **binders**—media versions and related file and metadata, for processing in operator-intervention media processing systems. An ingest workflow containing a Register action affiliates the media and metadata with the binder.

You also gained your first exposure to the Workflow Portal, which is an easy-to-use operator interface for intervening between workflows to perform manual checks and modifications to media and metadata.

Finally, you created a simple production workflow to create a trimmed output media file that is transcoded from one input format to a different output format by the Flip action.

Tour 8: Controlling Workflow Execution with Variables

This 30 minute tour introduces you to [variables](#) in workflows. Variables are used for passing important [job](#) information between actions, controlling execution flow, changing action priority, and controlling job routing.

Overview

In Vantage, a variable is a named unit of data (for example, an integer named *Video Width*) that only lasts as long as the job is executing. Variables can be used to pass data between actions. For example, an Analysis action might publish a variable named Video Width containing the width of the frame in a particular media file, and a Decide action might make a decision based upon the value of Video Width.

You can create and define variables in the Vantage Management Console, or you can define them directly in Workflow Designer, as you are configuring an action.

A variable can be supplied a default value, and the value of the variable may also change during the course of workflow execution. You can also use the current value of a variable without changing it—for example, determining if a numeric value (in the variable *Video Width*) is 720.

Each variable has three key characteristics that you define when you create it:

- Name (such as *Number of Audio Channels*)
- Type (such as *Integer Number*)
- Default value (such as 50)

Variable values can be changed in actions that are designed to use variables, such as the Analysis, Populate, Watch and [Associate actions](#).

Variables are passed from action to action through action connections. When an action creates (or sets) a variable, all downstream actions that use variables can access the variable's current value.

If an action creates a variable but doesn't explicitly set its value, the variable's default value (which is set in the [Management Console](#)) is used. For example, in the Complex Transcode workflow, you could set the *Priority* variable to 100 (higher priority) in one of the [Flip actions](#); the other could use the default value of 0 (lower priority).

Finally, variables are temporary; the information only lasts as long as the job is executing—and is known only in the context of the running job.

Variables can be used in several ways:

- To dynamically control settings or change configurations in actions
- For routing tasks for execution on specialized platforms
- For decision-making to determine which branch of actions execute
- To determine the priority of a particular action.

Setting a variable in an action on one branch of a workflow does not affect the value of a variable with the same name on the other—because these are actually two different copies of the variable, in different branches.

Important Note: If workflow branches merge, variables with the same name collide in the first merged action. The value from the branch which completes *last* is updated last—and it is the value that is passed on. Because the branch which finishes last cannot be known when you create the workflow, Telestream recommends that merged branches have actions which explicitly reset colliding variables, before using them again downstream. If you need both variable values past the merge, you should start with two different variables; one on each branch.

Starting the Vantage Management Console

The Vantage [Management Console](#) is the program you use to configure and administer your [Vantage domain](#)—including Vantage services, [licenses](#), and workflow design items, including variables. Vantage user accounts are also created in the console.

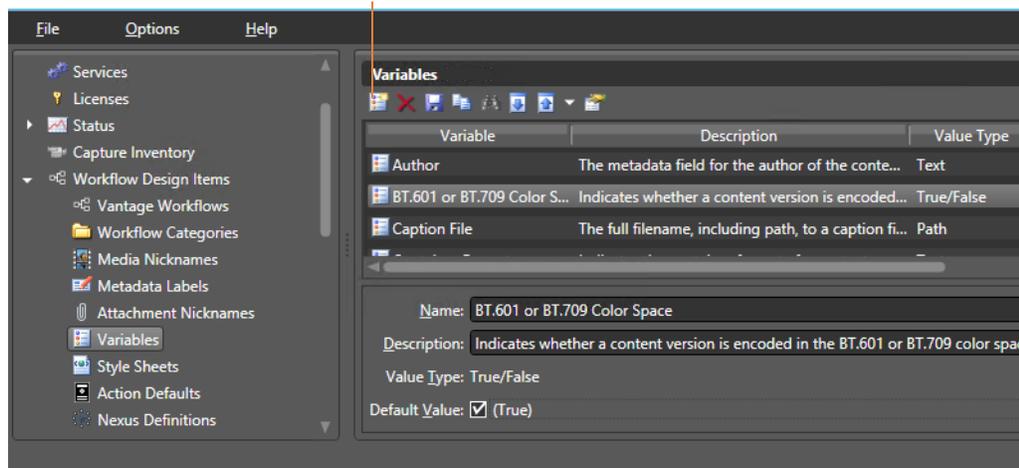


1. Double-click the Vantage Management Console shortcut to launch it.
2. Select a domain and log in using a Vantage user with administrative privileges (default: Administrator, no password), unless User Administration is disabled.

Creating Variables

1. Select Workflow Design Items > Variables to display the Variables panel.

New Variable button in the toolbar



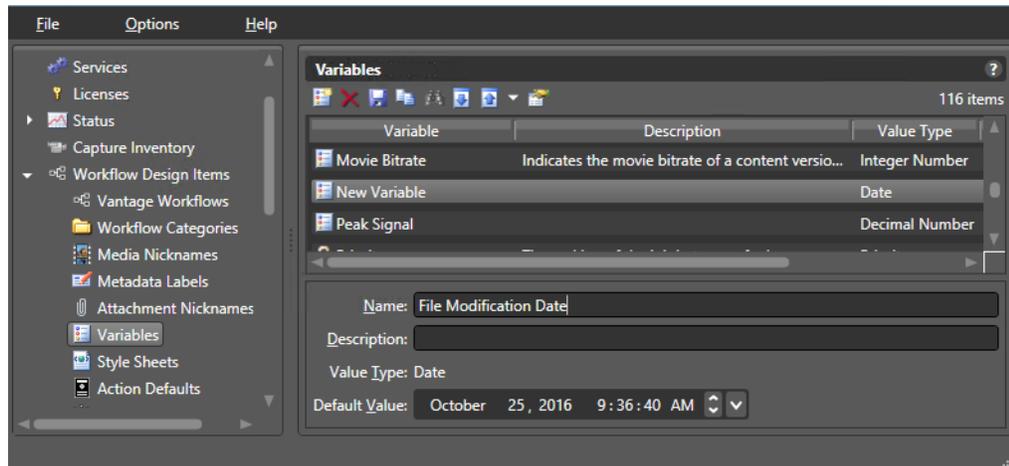
The Variables panel displays a list of variables, which includes default variables plus those created by Vantage users in this domain. You can use the default variables in workflows as-is, and you can create your own.

2. Select the *Curtailed* variable to display its details (which you can configure) at the bottom of the panel. (When focus is on the table, you can use keyboard keys to

locate a given variable by name—for example, press R to go to the first variable in the list that starts with R.)

Rather than using a default variable, let's create a new Date variable called *File Modification Date*.

3. To start, click the New Variable button in the toolbar (far left button).
4. Vantage displays the Create New Variable dialog. Select the type of variable you want to create—Date.



5. In the details panel, enter the name `File Modification Date`, and leave the default value unchanged.
6. Click the Save button  to save your variable.

Note: There is nothing special about the name *File Modification Date*—you can create variables with any name that is not already in use. In this workflow, we will use this specific variable to store the modification date of the file, so we'll name it descriptively.

Using System Variables

Vantage provides system variables as a domain-wide resource. These variables cannot be renamed, and they should not be deleted.

The *Priority* variable is a system variable. The value of the *Priority* variable sets the priority of any actions that receive it to determine task balancing. Priority is a number, where larger numbers mean higher priority (for example, priority 10 is a higher priority than 1) over other actions competing for the same resource. You can set the *Priority* variable value in any action in the workflow—for example, Watch—to control priority of execution of all downstream actions in that workflow.

The *Lightspeed*, *K20* and *K80* system variables are assigned automatically to Lightspeed-aware services, when they start up on any Telestream Lightspeed server. Their value is set to True. When a job runs, an action in that job can query these variables and use them for run-on rules or for reporting purposes.

The *VantageMachineName* system variable is automatically added to each Vantage service as it starts up on a server; its value is set to the name of the host upon which the service is running.

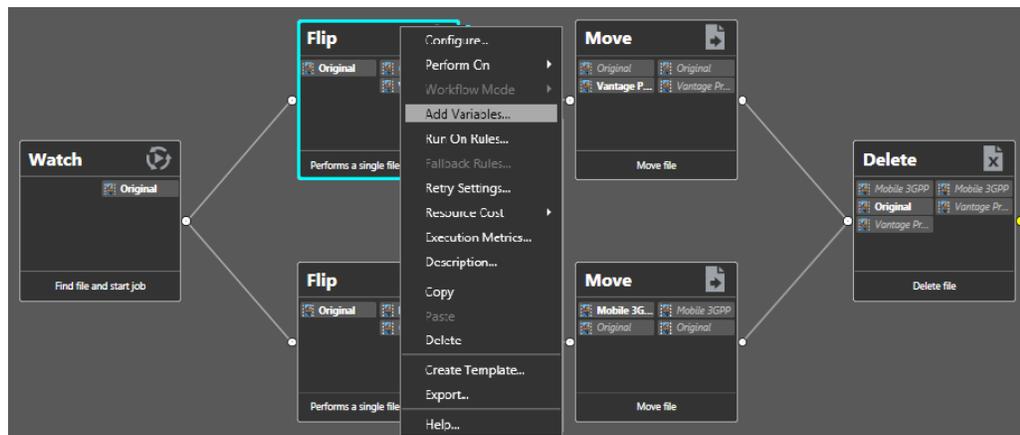
Setting Variable Values in a Workflow

The power of variables is that their value can change dynamically during execution of a workflow. There are several ways that a value changes:

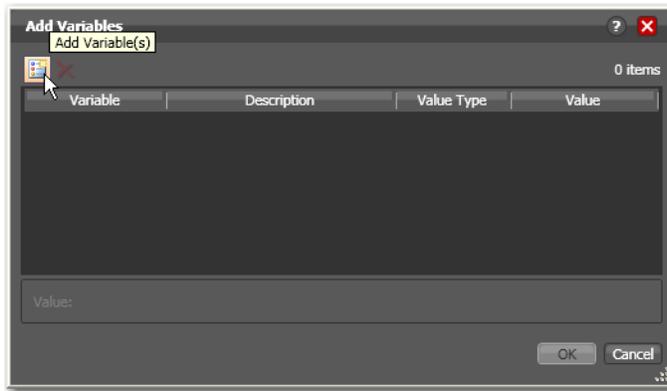
- As the result of an action executing. For example, analysis (and many other) actions can publish their results as variables—such as determining the number of pixels that compose a letterbox. Similarly, Watch and [Associate actions](#) can publish information about files that they detect, using variables.
- From external metadata. Specifically, the Populate action can set variables based upon metadata label values found in external files.
- From a [Compute action](#), which can create variables from other variables. For example, Compute can add two number variables to create a new variable.
- As a pre-step to an action executing; any action can set the value of any variable prior to execution.
- As a pre-step to a server executing an action; any service on any server can be configured to set a variable before executing an action.

Let's experiment with two of these. First, let's modify one [Flip action](#) in the Complex Transcode workflow, so that Vantage processes it with a higher priority than the other.

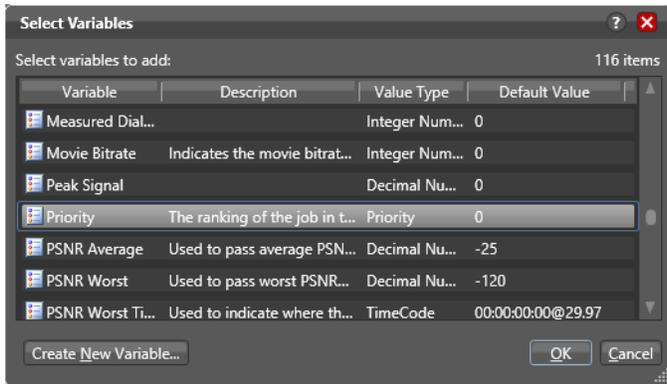
1. Open Workflow Designer, and duplicate the *Complex Transcode Delete* workflow from Tour 5 as *Complex Transcode Tour 8*.



2. Right-click the QuickTime Flip action and select Add Variables from the context menu to display the Add Variables dialog.

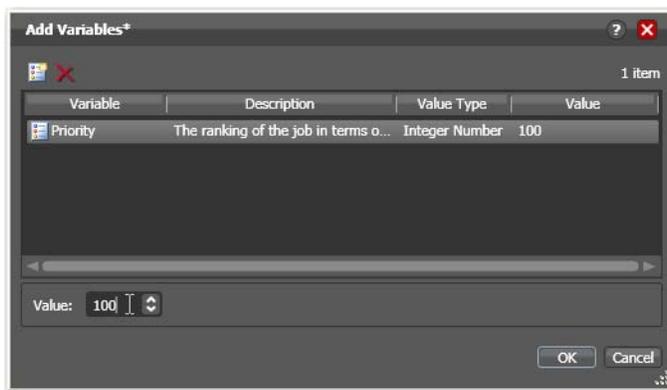


3. Click the Add Variable(s) button in the toolbar to display the Select Variables dialog.



4. Scroll through the list (or press the first letter of the variable—in this case *P*) and select the Priority variable—click OK to add it to this action.

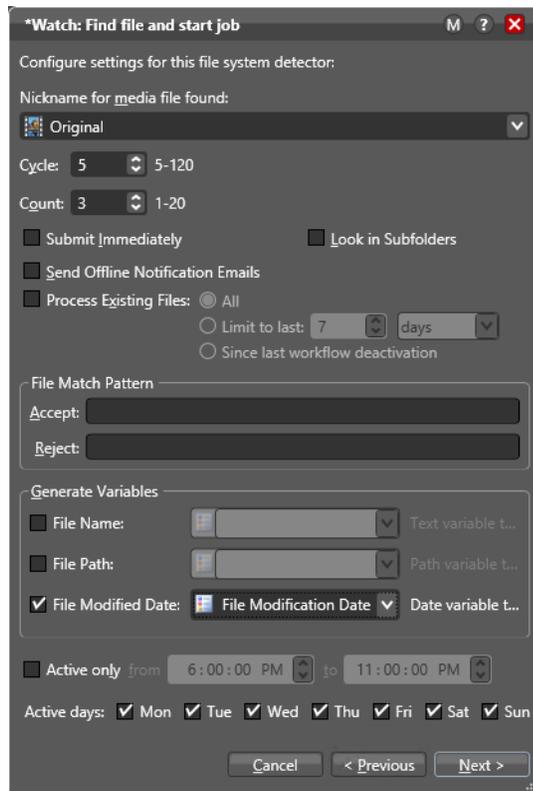
Now, the Priority variable is attached to the workflow and its default value is 0. You can change the value of the variable at the bottom of the panel—higher numbers indicate higher priority, lower numbers indicate lower priority.



5. Enter a large number (for example, 100) and click OK to make this variable setting permanent.

Next, let's configure the Watch action to set the value of the *File Modification Date* variable that you created earlier, each time it picks up a file and submits a job.

6. Open the Watch action Inspector and click Next three times to display the Configure Settings panel.



7. Under Generate Variables, check the File Modified Date checkbox.

8. Use the menu to the right to select *File Modification Date*, the variable that you created in the [Management Console](#) earlier in the tour. You could also add the new variable right here in the dialog.

9. Click Next, then click Finish.

Now, your Watch action will assign the file modified date value of each file that it submits for processing to the *File Modification Date* variable. You'll see how we can use this variable in the next tour.

Conclusion

In this tour, you learned about managing and creating variables, as well as how to set variable values in a workflow. In the next two tours, you'll learn about how to use variables for decision-making, and how to use them to pass information between actions in a workflow.

Tour 9: Decision Making in Workflows

This hands-on tour takes about 20 minutes and introduces you to *decision-making* using variables to control the logical flow of media through a workflow.

Action States

As actions execute, they are passed the [job's action state](#) from the previous action. If the action executes, they also set the action state before passing it on. Monitor actions represent an exception—as an origin action, they do not inherit an action state. Actions set one of three [action states](#): Success, Ignore, or Fail. Some actions (Decide, Examine, Compare, and Identify, for example), allow you to configure a state. However, most actions' state is set automatically—by the service that executes it.

The action state is automatically passed from one action to the next so that each action may determine whether or not to execute, based upon the incoming state. This pattern repeats throughout the execution of the entire workflow.

Action states also enable decision-making—causing actions (or entire branches of the workflow) to not execute.

To understand how to implement and utilize action states for decision-making and logic, it's important to understand their precedence, whether an action receives states from one or multiple incoming actions (a merge of multiple branches):

- If at least one incoming action state is Fail, regardless of other incoming states, the action inherits Fail and must pass it on whether the action executes or not—Fail has precedence over all action states. Most actions will not execute if they inherit Fail. If one action fails, the entire job fails.
- If there is no Fail state, but at least one Success state, then the action inherits Success—which has precedence over Ignore. Usually, actions execute when they inherit Success. After execution, the action may emit Success, Fail, or Ignore.
- If all incoming states are Ignore, the action inherits Ignore. Ignore has lowest precedence of the three states. An action may or may not execute when inheriting an Ignore, based on its state execution setting. If an action receives an Ignore state and does not explicitly fail, then it emits a Success state. Otherwise, it emits a Fail state *unless* it is an action which can emit Ignore, and you have configured it to do so.

Generally speaking, actions only execute if (1) none of their predecessors set the Fail state, and (2) at least one of the predecessors set the Success or Ignore state.

Similarly, if an action sets Ignore, the next action is unlikely to execute. Most actions, excluding Watch and Receive (since they are origin actions), can be configured to perform on certain states—to send an email for example, if they detect a failure.

Note: Actions can be configured to execute upon Fail or Ignore—for example, to send an email notification. To configure an action's execution based on the incoming action state, right-click and select Perform On. You can also set an action to execute regardless of the state: Right-click and select Perform On > Any.

The Decide Action

The Decide action inspects selected incoming variables and sets the action state based upon the result of the value. Decide effectively acts as a gatekeeper to control branching by setting a Success, Ignore, or Fail state, which is passed on to the next actions, which can be set to conditionally execute, based on the incoming [action state](#).

Because variable values are often specified at run-time, Decide enables you to perform an analysis and set its state at run-time as well—and thus, the workflows may behave differently for every job processed by the workflow. Decide is a powerful action allowing you to build data-driven processing into a workflow.

Note that if you want to have multiple branches in a workflow, and only execute specific branches for each job, then you'll need multiple decides—one acting as a gatekeeper for each branch in the workflow.

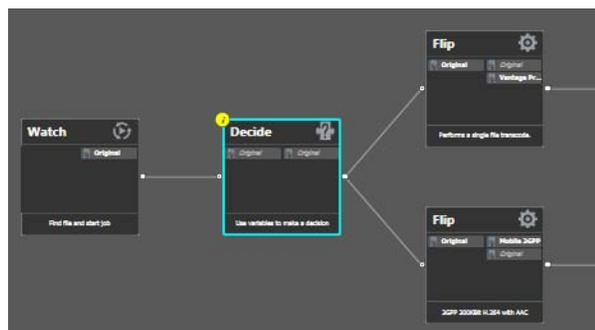
Processing New Files

Let's look at an example (start Workflow Designer if it isn't already open).

1. Open the *Complex Transcode Tour 8* workflow and duplicate it as *Complex Transcode Tour 9*. We'll update this workflow to process only new files that are in the [hot folder](#).

Recall that in Tour 8 the Watch action was configured to publish a variable named *File Modification Date*. We'll use this variable to process only those files created or modified after January 1st, 2010.

2. Open the Watch action in the *Complex Transcode Tour 9* workflow and set File Modified Date to publish the File Modification Date variable.
3. In the actions toolbar, open the Common category and drag a [Decide action](#) onto the workflow so that the Decide action follows Watch, and all remaining actions follow the Decide action, as shown in the following figure.



4. Open the Decide action [Inspector](#).
5. The Decide action is designed to perform evaluations upon variables, and set a state if they meet *all* the conditions that you specify.
6. In the top left, click Select Variables and add the *File Modification Date* variable.

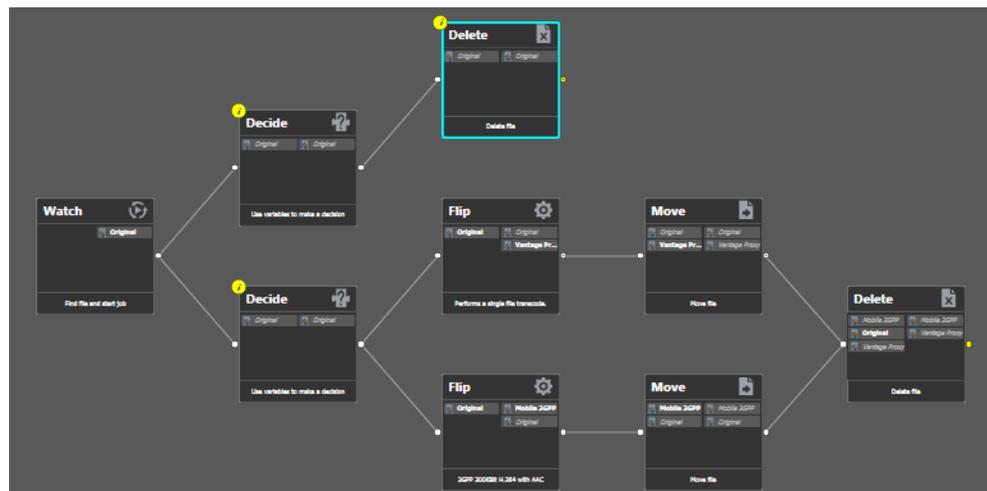
7. Select the > (Greater) operator and set the test value to *January 1, 2016, 12:00:00 AM*.
8. Verify that the state selection is Success—meaning that if the date is later than January 1st, this action will emit a Success—and that the Otherwise state is Ignore.
9. Click Finish to close the Inspector and update the workflow.

Now—because actions by default operate only when the incoming **action state** is *Success*, your workflow will process files created after January 1st, but will not process files created on or before this date.

Filtering Old Files

But what if you wanted to simply delete old files?

Let's modify the workflow to delete old files. To do that, you'll create a new branch off of Watch, with a **Decide action** and **Delete action**, as shown in this figure.



1. Add the Decide action, connected to the Watch on a separate branch.
2. Now, open the Decide action Inspector, and configure similarly to the previous one—add the *File Modification Date* variable, select the reverse operator <= (Less Than or Equal), and set the date to *January 1, 2016 12:00 AM*. If this is true, Success is set; if false, Ignore is set.
3. Click Finish to close the Inspector.
4. After the Decide action, add a Delete action and configure it to delete the *Original* file. It executes by default only on Success states.

This workflow now has two branches, each controlled by a Decide action—one will process only new files, the other will process only old files. Because of the way we configured the Decide actions, each file submitted will only be processed in one branch in this workflow.

Conclusion

In this tour, you've learned how to assign values to variables, to test those values, set action states, and use the Decide action to make run-time decisions—all features designed to enable you to add control to your workflows, based on information you've gleaned from your input file.

Tour 10: Analyzing and Modifying Media Files

This hands-on tour takes about 15 minutes and introduces you to the concept of dynamic parameters in Vantage, and how they can be used to pass information between actions in a workflow.

Note: To execute workflows you create in this tour, you'll need a [license](#)—certain features (the [Examine action](#), for example) will not execute without one. For a trial license, contact sales@telestream.net.

Thus far, when we have configured our actions in a workflow, parameters have been set at a fixed value. For example, the frame size of a transcode output is 320x240. Obviously, by using fixed values the action performs the task the same way each time—creating an output file that is 320x240—every time this action executes.

How would workflow processing improve, if we could change these settings and parameters job-by-job, on the basis of the media being processed?

Vantage supports this capability to dynamically change the value of parameters and settings by binding parameters to variables. Recall that variables are metadata that is only known at run-time, and this metadata may be different for every single file. In Vantage workflows, you can configure almost any parameter, in almost any action, to use a variable (and its current value) as its input.

Automatically Detecting and Cropping Curtains

Let's build a real-world example. In this example, we know that some of our content has black on the left and right—*curtains*—that we want to crop. However, the amount of black is likely to be slightly different for every file being processed in Vantage. Instead of creating many workflows to deal with each situation—and manually measuring the black before processing, we'll build a workflow to crop the curtains automatically, as appropriate for each incoming media file, by combining an [Examine action](#) with a transcode with filters implemented.

1. Open the *Complex Transcode* workflow from Tour 4 again, and duplicate it as *Complex Transcode Tour 10*.
2. Open the Analysis group and add an Examine action—connect it between the Watch action and the QuickTime H.264/AAC Flip action. (You can place the action directly on the connector line and it will automatically connect to both, replacing the line.)
3. Open the Examine action Inspector.
4. Click the Analyzer menu and select Curtain Detection. Workflow Designer displays the configuration setting for this analysis tool.
5. Open Generate Variables and configure this action to publish two variables (by checking them): Suggested Crop Left (select the Curtained Left Pixels variable) and Suggested Crop Right (select Curtained Right Pixels).

Note: Vantage provides many predefined variables for use in your actions. While this is convenient, you're certainly free to create your own variables and you may often need to in order to support your specific applications.

6. Under Input Media File Nickname, select *Original* as the file to analyze.
7. Click Save to update the action and close the Inspector.
8. Open the [Inspector](#) of the Flip action immediately after Examine.
9. Click on the Video Stream button, then click the triangle in the Video Filter button (2nd from the right) to display the video filters you can use. Add a Resizing video filter to the transcode.
10. Select the Resizing filter to display its parameters at the bottom of the window.
11. Expand Cropping and Padding, and select Manual from the drop-down menu.
12. Click the green variable buttons beside *Crop Left* and *Crop Right*, and bind those values to the *Curtained Left Pixels* and *Curtained Right Pixels* variables, respectively.
13. Click Save when you're done.
14. Choose a media file that contains curtained material, submit a [job](#) for processing, and view the results.

You should see a dynamic transcode that automatically adjusts Resizing settings based upon incoming curtain data from the curtain detection Examine action. The resulting media file has full-screen video with the curtains removed from the sides. Because variables are used instead of fixed curtain definitions, transcoding automatically adapts to the curtain width of each media file, cropping the output to full screen regardless of variations in curtain width!

Take a moment to explore the rest of the transcode settings in this Inspector, and notice the bind buttons on many parameters. You'll find the bind button in other actions as well, allowing you to define many values with variables that detect actual values in the media files rather than using fixed values.

Conclusion

In this tour, you learned how to create dynamic parameters that use variables as their inputs. This feature enables you to create powerful, dynamic workflows that adaptively change what they do based on the metrics of the media being processed.

Tour 11: Understanding and Using Open Workflows

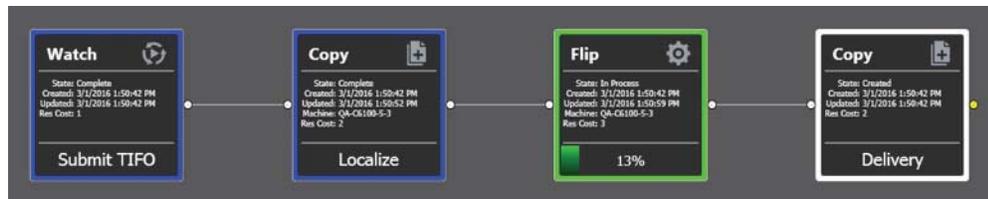
With Vantage 7.0 Telestream introduced the Open Workflows licensed option, a new way to gain much greater processing efficiency and speed from Vantage workflows. Using Open Workflows your Vantage workflows can run many times faster on the same hardware because of concurrent processing.

How does it work? With Open Workflows, open-enabled actions in a workflow can run in parallel, unlike the serial operation of traditional Vantage closed workflows.

Looking at the figures below, you see a closed workflow running serially in the upper view. The Flip action is running while the second Copy action waits for the Flip action to finish. In the lower view, the open Copy and Flip actions run concurrently. The differences in processing and other details about closed versus open workflows are explained in detail in the next topic.

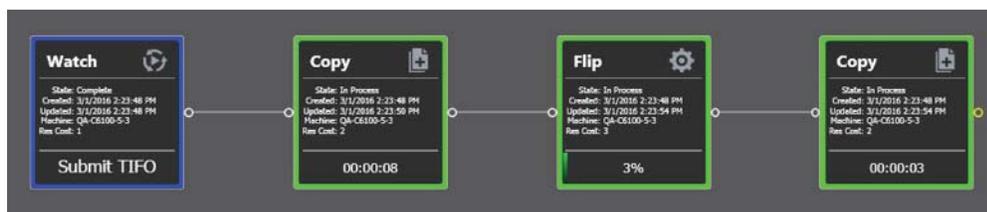
Closed Workflow

- Existing Vantage behavior
- Actions execute sequentially
- Throughput is constrained
- Run time is cumulative



Open Workflow

- Optional open capability
- Actions may run concurrently
- Throughput is dynamic
- Run time is greatly reduced

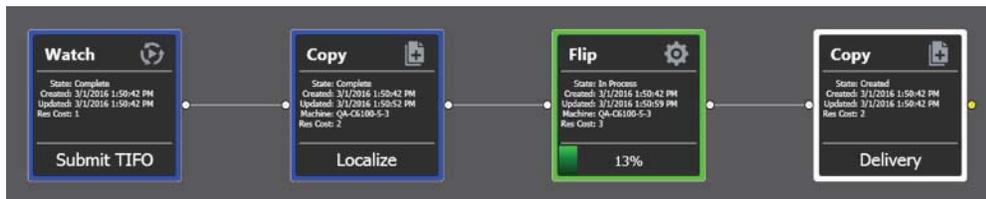


Closed and Open Workflow Processing

Prior to Vantage 7.0, action processing was closed, which means that each action cannot begin processing until the previous action has completed. A closed workflow enables you to systematically control the processing flow, especially when you want to use Service Limits and to have explicit control over Vantage nodes.

The workflow shown below illustrates closed workflow operation:

- The blue actions have completed.
- The Flip action has begun working.
- The subsequent Copy action is waiting for the Flip Action to complete.



The inherent latency of this job is expressed as follows:

the time of the first Copy + the time of the Flip + the time of the second copy

If the first Copy (labeled *Localize*) pulls from a remote file system with poor throughput and this action takes 10 minutes to complete, the Flip action cannot begin processing for 10 minutes. If the Flip action transcodes the file in 3 minutes and the final Copy takes 5 minutes, the total job time is 10 + 3 + 5 or 18 minutes.

Latency refers to the serial nature of how one action must wait until the preceding action completes. This process incrementally increases the overall job time at each step. The cumulative nature of this sequential processing is illustrated below:



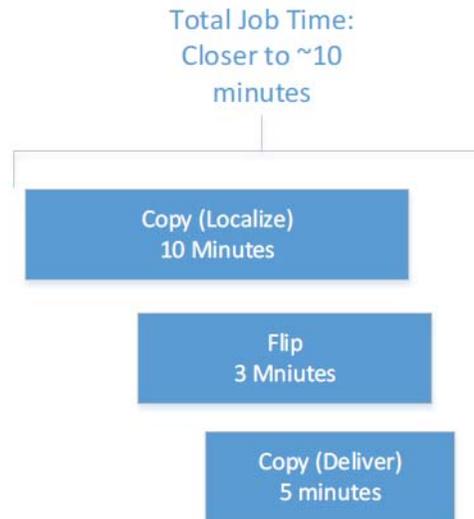
The Open Workflow Difference

In contrast to closed workflows, Open Workflows permit most actions to operate concurrently. That is, the current action can be performed while the previous and subsequent actions are also being executed. This removes the inherent latency associated with the discrete steps of a traditional closed workflow.

Refer to the following workflow in which Open Workflows is enabled. You can see that the Copy, Flip and the final Copy are all working at the same time as shown by their green Job Status. Once the media blocks have been written to disk in the first Copy, the Flip action is able to read these media blocks and begin the transcoding process. When the Flip action finishes processing and writes the resultant transcoded media blocks to disk, the final Copy action moves them to the appropriate destination.

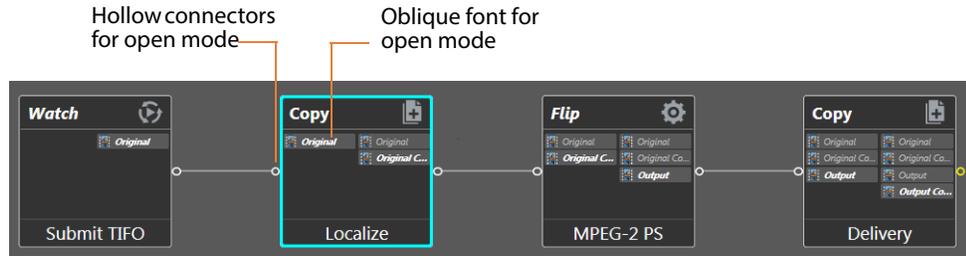


Using the numbers from the closed workflow example, the first Copy action will still take 10 minutes. However, since the Flip action and the final Copy action can begin processing the incoming file almost immediately, the overall job will be completed in a time that is much closer to 10 minutes. The figure below illustrates the concurrent nature of this execution:



Open Workflow Indicators

Open Workflows include certain visual characteristics so you can recognize open actions. As shown below, connectors are hollow, and the nicknames are italicized if an action is operating in open mode. Actions in closed mode look the same as they always have, with filled connectors and regular type.



Open Actions

Many actions can execute in Open mode—but not all. Additionally, in some instances, the inbound processing to the action may be open but the outbound is closed, and vice versa. The following table summarizes the actions supported by Open Workflows.

Service	Actions	Open Inbound	Open Outbound	Notes
Monitor	Watch	N/A	Yes	Windows, FTP, HTTP and Aspera; other file systems as the need arises. On Windows only, the file being submitted can be an open, growing file (one that is being written). On other file systems, the file must be complete and closed before it can be submitted.
Transport	Copy	Yes	Yes	Input and output may be TIFO, Transport Stream or Program Stream files; only valid when using the Windows File System.
Transcode	Flip	Yes	Yes	Input only for supported file formats (below)
<p>Note: In order to localize a file from a file system other than Windows in open mode, the file must already be complete. For example, in the following workflow: Watch (FTP) > Copy (local Vantage store) > Flip, the Copy and Flip actions will run in open mode when the source file on the FTP server is a complete, closed TIFO file, since the Flip action only supports TIFO open inbound.</p>				
Multiscreen	Multiscreen Flip	Yes	No	Input only for supported file formats (below).
IPTV	IPTV Flip	Yes	Yes	Input only for supported file formats (below).

Edit	Tempo, Conform	No	Yes	Input only for supported file formats (below).
Live	Capture	No	Yes	Outbound only.
Metadata	All Actions (Populate and Transform)	Yes	No	Instantaneous, no media dependency; XML files are closed.
Common	Compute, Construct, Decide	Yes	Yes	Instantaneous, no media dependency, actions will not run until input variables are all available.

Open File Formats

Only file formats that are able to be read while being written (aka “growing files”) can be supported by Open Workflows. This is fundamentally controlled by both the file wrapper and the codec selected for transcoding operations.

Note: In order for a transcoding action to ingest media an input in open manner, the decoder must be configured for a format that supports Open Workflows.

The following file formats are supported for both reading and writing in all open transcoding actions listed in the preceding table:

- All actions that are open capable support open TIFO for inbound, outbound, or both depending on the action
- Open Transport Stream is only supported for IPTV Flip and Flip actions outbound
- Open Program Stream is only supported for Flip actions outbound
- Flip actions only support PCM audio for inbound

Choosing an appropriate file wrapper greatly enhances the speed of execution for an Open Workflow. The Telestream Intermediary Format (TIFO) offers a good choice for file wrapping as it supports Open Workflows and all codecs. When you are capturing live content from a Telestream Pipeline HD Dual or the Lightspeed LiveCapture server, the media can be a TIFO wrapped file that can immediately be consumed by a Vantage Open Workflow for extremely fast live content deployment.

If you need additional speed, adding a Telestream Lightspeed Server will further increase processing speed and reduce the time to produce media assets.

Open Workflows are ideal for scenarios where media residing on external systems (S3 buckets, FTP locations, and Aspera servers) is to be localized, processed, and delivered to external storage locations. Files processed on S3, FTP or Aspera systems are limited to complete, closed files in TIFO format.

Open Workflows are also ideally suited for Vantage workflows in which one action is creating a mezzanine file for the purpose of a second action creating a specific rendition. For example, Post Producer might create a high resolution mezzanine file followed by employing the Cable IPTV Flip to produce a vendor specific Transport Stream.

Licensing Requirements

Licenses are required for Open Workflows. These licenses may be enabled for an entire domain, or for individual nodes within a Vantage array. If Open Workflow licenses are acquired for specific nodes, then Workflow jobs that need to take advantage of Open Workflow processing can be submitted to these specific nodes.

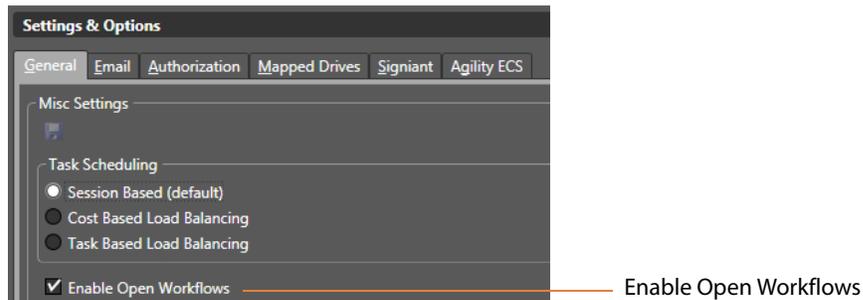
Creating Open Workflows

You create an Open Workflow using the Workflow Designer in the same way as a standard workflow. However, Open Workflows must be enabled in three places:

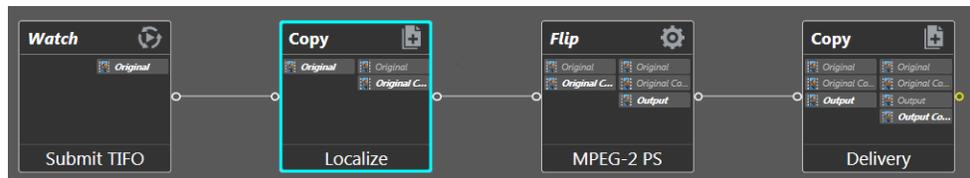
- Enable domain level in Vantage Management Console *Settings & Options* > *General*
- Enable workflow level in Workflow Designer, workflow drop-down
- Enable action in context menu (right click) Workflow Mode

These are the steps to create your first Open Workflow:

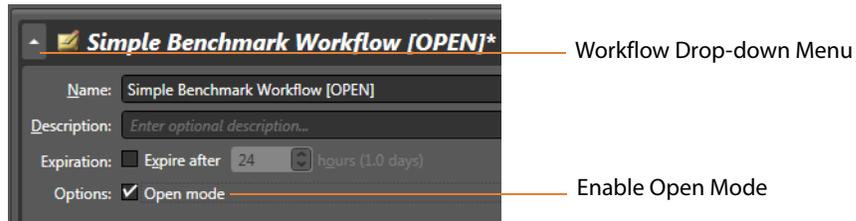
1. Open the Vantage Management Console, select Settings & Options, select the General tab, and check Enable Open Workflows.



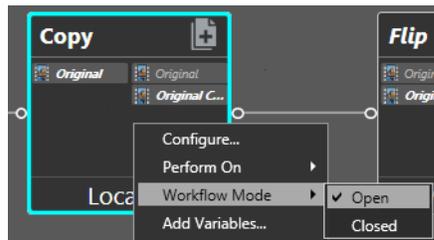
2. Open the Workflow Designer and create a new workflow, such as this one.



3. Select the workflow drop-down menu, and check Options: Open mode.



4. Right-click each action in your workflow, select Workflow Mode, and check Open.



That's all there is to it. You can submit jobs and use the workflow as you normally would. Notice that the Job Status shows some of the open actions operating simultaneously.

Conclusion

In this tour, you learned about Open Workflows and how they differ from the closed workflows Vantage has previously employed. Now you can begin analyzing your existing workflows to see what kind of efficiency gains might result if you convert some of them to Open Workflows.

Managing Workflows

Vantage Workflow Designer is the primary client program in Vantage: you use it to design and configure workflows to meet your media transcoding requirements. Workflow Designer combines a wide range of workflow design and media processing capabilities into a single program, enabling you to create workflows to solve a broad set of operational media processing problems.

Workflow Designer also allows you to activate and deactivate workflows, and allows you to submit media, and monitor the [jobs](#) that are created as workflows process the media you've submitted for processing.

Use this chapter to learn how to use Workflow Designer to create, construct, and configure workflows to perform specific media processing tasks in your organization.

Note: For basic information on starting/stopping Workflow Designer, and changing domains and user names and passwords, see [Vantage Client Programs Overview](#).

Telestream recommends that you also take the [Vantage Workflow Designer Tours](#) to help you become familiar with creating and configuring a wide variety of workflows.

- [Starting Workflow Designer](#)
- [Workflows Overview](#)
- [Using the Workflow Design Workspace](#)
- [Managing Workflows](#)
- [Constructing Workflows](#)
- [Configuring Actions](#)
- [Specifying Action Settings](#)
- [Implementing Processing Logic in Workflows](#)
- [Managing Vantage Folders](#)
- [Troubleshooting Workflow Designer](#)

Note: Vantage Transcode (a licensed, workflow design web app) can also be used to create simple transcoding workflows.

Starting Workflow Designer

To start Workflow Designer, do one of the following:

- Double-click its shortcut on your desktop
- Click Start > All Programs > Telestream > Vantage > Workflow Designer.

Next, select a domain and log in.

Note: For complete information on managing Windows clients, including starting and stopping the program, logging into and changing domains, changing Vantage users and passwords, and selecting configurations, go to [Windows Vantage Client Program Management](#).

Workflows Overview

A *workflow* in Vantage is a set of connected [actions](#) (each of which performs a specific task). Vantage provides over four dozen different actions, which you use as the building blocks of workflows. Workflows can be designed and configured to perform a controlled, automated media processing application. Workflow Designer organizes its actions by category (and incidentally, by the service which executes them), for ease of use. While most workflows center around the process of decoding and encoding video, you can also construct workflows that—while still media-centric—don't flip media. Instead, they might process metadata files, or perform other tasks.

These topics provide information about workflows you'll find helpful before starting the construction and configuration process.

- [Workflow Basics](#)
- [Workflow Design & Configuration Overview](#)

Workflow Basics

You construct and configure workflows in Workflow Designer using the Workflow Design workspace, by adding various types of actions ([Watch action](#), [Flip action](#), [Copy action](#), etc.) and connecting them together to form a logical chain of successive tasks. Workflows are stored in the [Vantage domain database](#), and actions in the workflow are executed by Vantage [services](#).

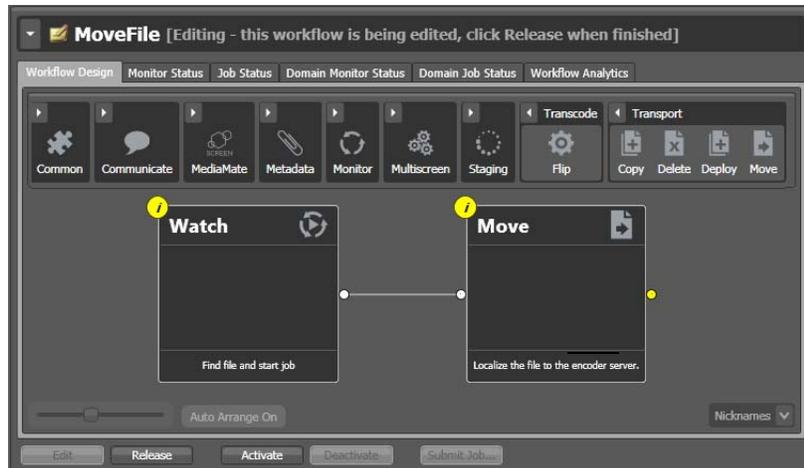
A valid workflow must start with an [origin action](#) (for example, a [Watch action](#) or [Workorder action](#)—those actions in the Monitor category, plus the [Receive action](#)), and consist of at least two actions, which must be connected. Single actions that are not connected to another action do not execute—a single, disconnected action invalidates a workflow, which prevents it from being activated for use.

Note: The Capture action is an exception to the two-action rule. The Capture action can be the single action in a workflow. This action enables SDI live streaming capture on a Live Capture server.

Workflows may have more than one origin [action](#), but each origin action will function independently of the others. Multiple origin actions permit different methods (or locations) in which to submit jobs to the same workflow.

Workflows are not required to end with a terminating action—an action without an output pin. The only formal terminating action is the [Forward action](#). The Forward action permits you to pass control directly from one workflow to another workflow, which must have a corresponding Receive origin action. This enables you to create simpler, general purpose workflows, and chain them together to provide more automation.

Workflows are executed by [jobs](#), which are created whenever a new file is discovered by the workflow's Watch (or other origin) action, or when you submit a [job](#) manually ([Manually Submitting Files Directly in Workflow Designer](#)).



Generally, you construct a workflow in stages: first, conceptualize and design the workflow and then add the actions, connecting them together to control execution. Finally, you configure each [action](#) in the workflow to perform exactly the way you want. Now, you can test your workflow, and fine tune it as necessary.

Once you have constructed and configured a workflow, you click Activate so it can be utilized. To edit it again—or just disable it—you just deactivate it. Then, click Edit, and when you're done, you click Release. When you are editing a workflow, others using Workflow Designer can view—but not edit—the workflow. These buttons are all displayed at the bottom of the main window.

To activate, deactivate, edit, or release multiple workflows at one time, see [Performing Batch Workflow Operations](#).

Workflow Design & Configuration Overview

Before constructing a workflow, it is helpful to have a solid understanding of its objective or application—what you want to accomplish with it. You'll have to determine what [actions](#) (tasks or steps) are necessary to implement the objective; where the media (and optionally, metadata and associated files) originate; what transcoding and metadata processing is required; where any new copies of media, metadata, and associated files should be stored or deployed, etc.

You should also know in advance what external systems these [jobs](#) will interact with (if any), and whether you want to register and track the output files and metadata related to each job in a Vantage catalog for future use; for example, a second workflow.

Armed with these details, you can construct the workflow, and configure each action to correctly perform its assigned task. Of course, if you don't have all this information at the start, you can configure the workflow later.

Once you have tested a workflow, you have to click Activate so it can be utilized. To edit it again—or just disable it—you just deactivate it. Then, click Edit, and when you're done, you click Release. These buttons are all displayed at the bottom of the main window.

Using the Workflow Design Workspace

This topic provides general information about using the Workflow Design workspace.

- [Design Panel Overview](#)
- [Viewing and Specifying Workflow Details](#)
- [Displaying Nicknames, Variables, or Run On Rules](#)
- [Displaying Action Summary Information](#)
- [Showing and Hiding Grid Lines](#)
- [Moving the Workflow Around in the Design Space](#)
- [Centering a Workflow](#)
- [Zooming In and Out on a Workflow](#)
- [Automatically Arranging Workflow Actions](#)
- [Automatically Validating Workflows](#)
- [Action Toolbar Display Options](#)
- [Using Context Menus in the Workflows Panel](#)
- [Controlling Workflow Status](#)

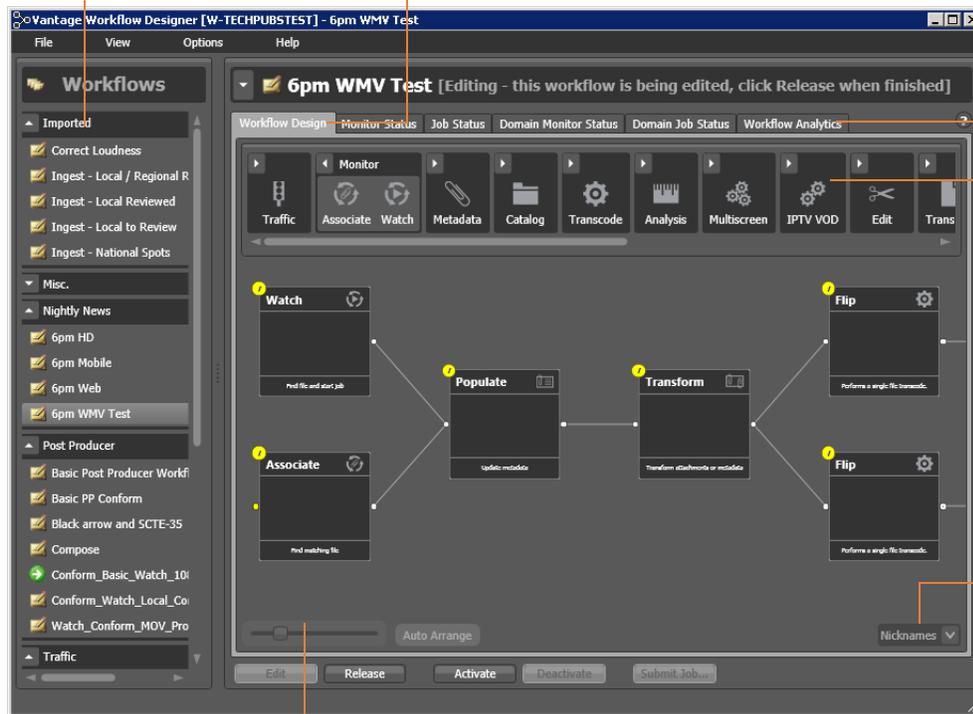
Design Panel Overview

You use the Workflow Design workspace (click the tab or select File > Workflow Design) to view, construct, and configure [workflows](#), and activate workflows for [job](#) processing.

The figure below illustrates the layout and main components of this panel (the Workflows panel (left) is not part of the panel, but is shown here for clarity).

Workflows panel—displays your workflows by category.

Use the Workflow Design workspace to construct and configure workflows.



Workflow Designer has workspaces for each key task.

Actions toolbar—drag actions onto the workspace to add to workflow.

Nicknames | Variables | Run On Rules View

Zoom control

At the top of the Workflow Design workspace is the **actions** toolbar, categorized in groups by action type. To sort them, right-click in the toolbar and select Sort by Name or Sort by Behavior.

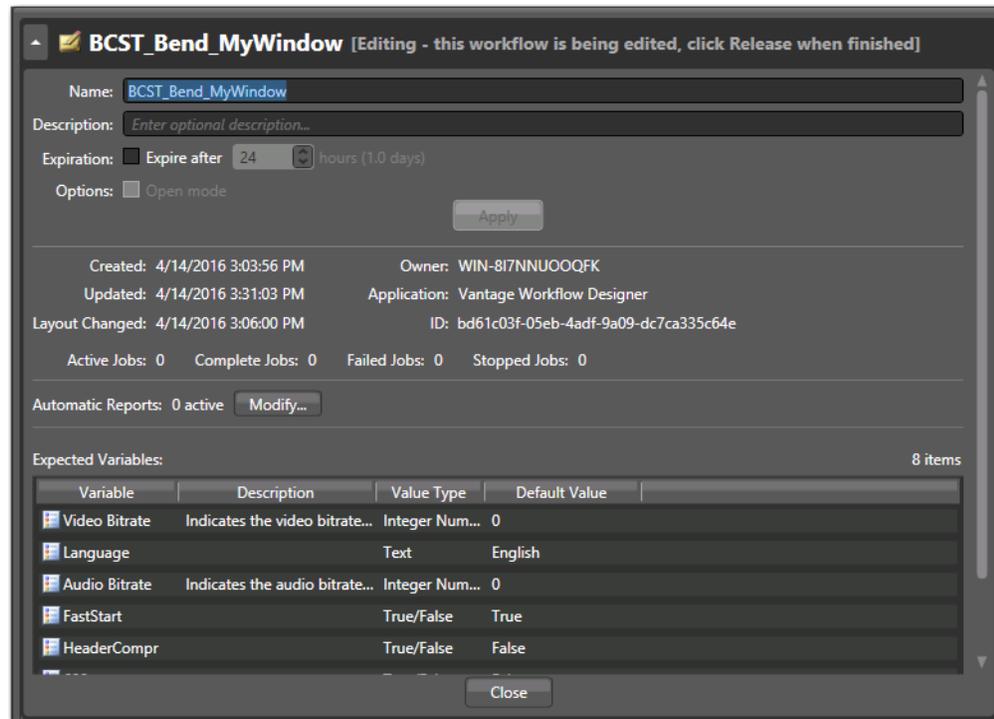
Click the arrow to open each action group and display the set of actions in this group.

Viewing and Specifying Workflow Details

To display or hide the selected workflow's details panel, do one of the following:

- Select File > Workflow Details Panel
- Click in the Workflow Design panel's title bar

This panel displays details and statistics about the workflow, plus settings you can configure:



- [Configuring General Workflow Settings](#)
- [Enabling Automatic Job Reports](#)
- [Viewing Expected Variables](#)

Configuring General Workflow Settings

Use the following controls to manage workflow information and settings:

- *Name*—Edit the workflow name.
- *Description*—Edit an optional description for the workflow.
- *Expiration*—Modify to configure the job and binder expiration time.
- *Options*—Check to enable open workflow mode, when enabled in the domain.

Click Apply to save your configuration changes. Click Close to hide the workflow details panel.

Details that displays directly below the Apply button includes creation and modification dates, the current owner (which client is working with the workflow) and the workflow's GUID in the database, along with basic job statistics.

Note: For SDK submission, you can select the GUID and then copy and paste it into other applications as required.

Enabling Automatic Job Reports

You can configure a workflow to automatically generate a job report each time the workflow processes media. Each time a job is processed through the workflow, a new job row is automatically added to the specified report file(s).

Note: You can also manually generate a job report on any job in your job history (see [Generating Job Reports Manually](#)).

Job reports are based on a job report configuration; these can be created in Workflow Designer or the Vantage Management Console (see [Managing Job Report Configurations](#)).

To add an automatic job report for this workflow, do the following:

1. Click Modify to display the Automatic Reports dialog.
2. Click the New Report button in the toolbar.
3. Select the job report configuration you want to use from the Report menu. (Click the Browse button to display the Job Report Manager to create a new report configuration or edit an existing one (see [Managing Job Report Configurations](#)).
4. Specify a directory path where the job report file should be created (the first time a job runs) or updated.
5. Optionally, click Filename Pattern to edit the file name pattern.
6. Check Enable.
7. Click OK to save the automatic report.

Viewing Expected Variables

The Expected Variables table displays a list of [variables](#) that are being utilized by actions in this workflow. If a variable is utilized—the setting in an [action](#) is bound to a variable—it displays here, along with its description, type, and default value.

The Expected Variables table can be used to determine which variables must be provided to the workflow: from another workflow, a workorder, added to an upstream action; Workflow Portal, or from a third party program using the Vantage API.

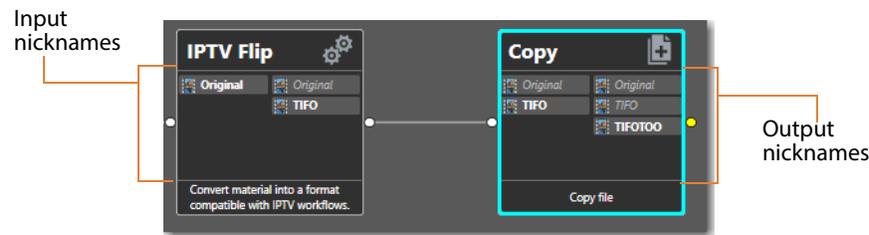
The Default Value column displays the current (static) default value for this variable. The value may change during the course of workflow execution.

Note: Variables that have been added to a workflow but are never utilized by any action in the workflow are not displayed in this table. For example, you manually add a variable to a Watch action—it is emitted for use downstream, but never used—consequently, it is not a *required* variable, so it is not displayed.

Displaying Nicknames, Variables, or Run On Rules

In detailed action view (right-click in the workflow design workspace to display the workflow context menu or press Ctrl-D to toggle it on and off), you can display three different sets of information directly on the actions:

- The **nicknames** of media files, **attachments**, and metadata labels that are available to the action
- Variables that are utilized in the action
- Run on rules that have been applied to the action (automatically or manually).



Nickname View—To display nicknames, select View > Action Details > Nicknames or select Nicknames from the menu in the bottom right corner of the Workflow Design panel. In Nicknames view, each action displays a list of file nicknames and metadata labels (in italics), plus **attachments**, that are available to the action before it executes (on the left), and those that are emitted by the action and available downstream when the action completes (on the right).

Nicknames (and labels) that are too long to display in the action display an ellipsis (...). To view the full nickname, hover over it on the action.

Nicknames/labels displayed in bold indicate that they are utilized in that action; as input files on the left or output on the right. Nicknames in italic are not used, either as input or output, as indicated.

In the example above, the Original nickname in the IPTV Flip action has been specified as an input file and is passed out. Likewise, the TIFO file has been specified as an output file in the IPTV Flip action. In Copy, Original is not used, but TIFO is specified as an input file. Original and TIFO are simply passed out, but TIFOTOO is specified as the output file.

Items on an **action** change color based upon the validity of the workflow. Nicknames displayed in red represent an error.

Note: Nicknames and labels that are used or affected by the action are highlighted. Nicknames and labels also change color indicating whether or not the workflow is valid.

For example, if you configure an action to utilize nickname *Copy7* provided by an earlier action and then delete the action that created *Copy7*, then *Copy7* displays in red on the now-invalid action.

Variable View—To display variables used in this action, select View > Action Details > Variables or select Variables from the menu in the bottom right corner of the Workflow Design panel. Unlike nicknames that are always displayed when available, variables are not presented if they are not utilized in the action.

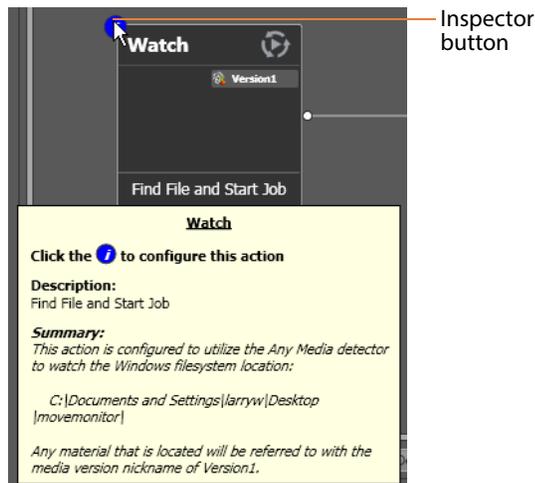
Variables that are too long to display in the action display an ellipses (...). To view the full name of the variable, hover over it on the action.

Variables displayed in bold indicate that they are utilized in that action; as input files on the left or output on the right. Nicknames that are not used, either as input or output, are not displayed, although they are passed through.

Run On Rules View—To display run on rules used in this action, select View > Action Details > Run On Rules or select Run On Rules from the menu in the bottom right corner of the Workflow Design panel.

Displaying Action Summary Information

To display **action** summary data, hover over the inspector icon as shown in this figure:



The summary displays the action type, description (editable), and a high level description of how the action is configured.

Showing and Hiding Grid Lines

To toggle the grid lines, do one of the following:

- Select View > Show Grid Lines (Control-G).
- Right-click in the workspace (but not on an [action](#)) and select Show Grid Lines to display horizontal and vertical grid lines.

Repeat to hide the grid lines.

Moving the Workflow Around in the Design Space

A workflow with lots of actions may be larger than your workspace when viewed at the zoom level you're using.

To move the workflow around in the workspace, click and hold anywhere on the design area other than directly on an [action](#). The cursor displays as a compass: you can drag the workflow in the appropriate direction, and release it when done.

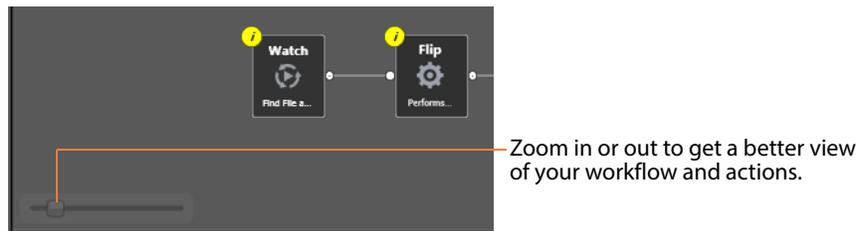
Centering a Workflow

To center a workflow in your workspace, do one of the following:

- Right-click in the workspace and select Recenter Diagram (Control-R)
- Select View > Recenter Diagram to position the workflow in the middle of the work area.

Zooming In and Out on a Workflow

You can zoom the design space based on the current position of actions, or you can select an [action](#) and center the design space on that action as you zoom.



Zooming In—To zoom in on a workflow so you can better view details, do one of these actions:

- Drag the zoom slider bar to the right
- Select an action, press Shift, and drag the zoom slider bar to the right to zoom in directly on the selected action
- Select View > Zoom In

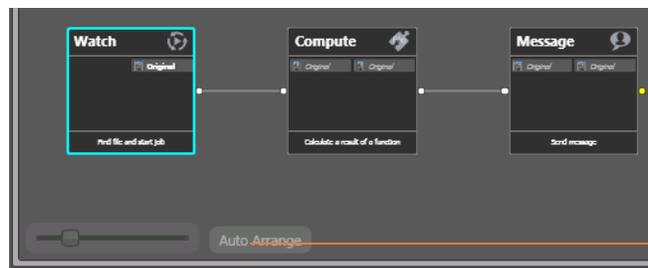
- Repeatedly press Control++ (the Plus key)
- Press Control and move the mouse scroll wheel up

Zooming Out—To zoom out on a workflow so you can see more actions, do one of these actions:

- Drag the zoom slider bar to the left
- Select an [action](#), press Shift, and drag the zoom slider bar to the left to zoom out on the selected action
- Select View > Zoom Out
- Repeatedly press Control-- (the Minus key)
- Press Control and move the mouse scroll wheel down

Automatically Arranging Workflow Actions

Use the Auto Arrange feature to assist you in visually optimizing and organizing the layout of actions in your workflow.



Enable or disable Auto Arrange to suit your construction style.

To disable automatic arrangement of actions while you're adjusting actions in a workflow, click the Auto Arrange button, located at the bottom of the Workflow Design workspace, to toggle it off. While Auto Arrange is off, the Auto Arrange button displays Auto Arrange SUSPENDED in yellow.

Click the button again to toggle auto arrangement back into effect.

Automatically Validating Workflows

By default, Workflow Designer monitors how actions are connected and organized in your workflow. Workflow Designer notifies you of problems, and prevents activation in the case of an improperly-organized or incorrectly configured workflow.

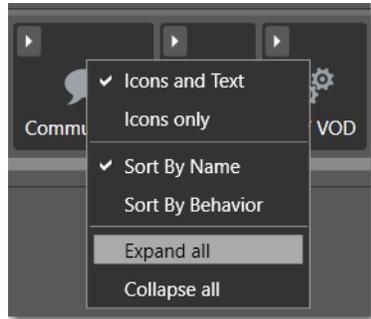
Disabling validation allows new actions to be connected or inserted in large workflows (those with about 30 or more actions) much faster. It also makes it faster to delete [action](#) connections.

To disable workflow validation, select Options > Auto Validate Workflow. When Auto Validate Workflow is disabled, validation is deferred until you open an action inspector, activate the workflow, or switch workflows. In addition, an orange indicator displays at the bottom of the tab, which you can use to re-enable validation.

When you create a workflow with 30 actions or more, Workflow Designer displays a tip to inform you about the Auto Validate capability.

Action Toolbar Display Options

Use the context menu to display the Action toolbar to suit your preferences. Right-click anywhere in the toolbar to select a menu item.



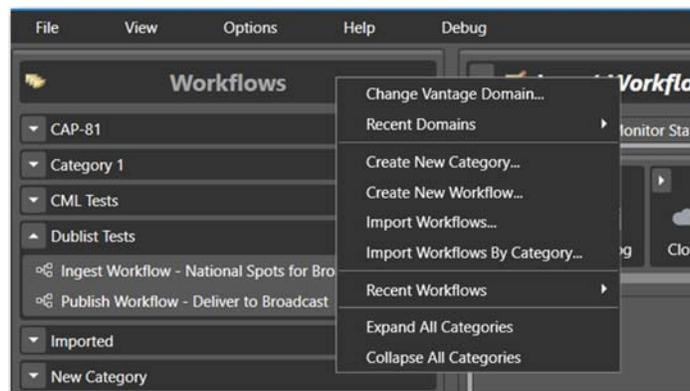
Toolbar Display Size—To reduce the size of the Action toolbar at the top of the design area, select *Icons only*. To display the action names (making the toolbar a bit larger), select *Icons and Text*.

Action Group Display Order—To display the action groups in alphabetic order, select *Sort By Name*. To display the action groups by functionality and (generally) in order of utilization in a workflow, select *Sort By Behavior*.

Expand/Collapse Option—To open all action groups, select *Expand All*. To close all action groups, select *Collapse All*.

Using Context Menus in the Workflows Panel

The Workflows panel's context menu displays in three variations, depending on the item you click on: title bar, category, or workflow. Here's an example:



Right-click in the Workflows panel to display the following context menus, depending on where you click:

In the Title of the Panel

Click in the title bar (or the empty space below the list of categories) to use this edition of the context menu to:

- Change the [Vantage domain](#)
- Create a new workflow category or workflow
- Import individual workflows or categories of workflows
- Open a workflow you've used recently
- Expand and collapse all of the workflow categories.

On a Workflow Category

When you right-click on a category, you can use this edition of the context menu to:

- Create a new workflow
- Rename or delete the category
- Import or export workflows to or from the category

CAUTION: When you delete a workflow category, all workflows in this category are permanently removed from the Vantage domain's [database](#).

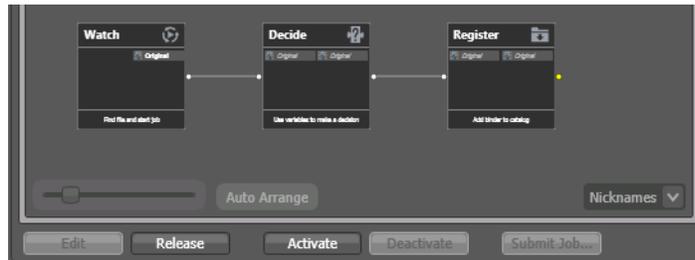
On a Workflow in the Workflows Panel List

- Right-click directly on a workflow to use this context menu to:
- Change the status of the target workflow (Edit | Release | Lock)
- Activate or deactivate the workflow
- Rename, delete, move or duplicate the workflow
- Display the Details panel for more details about the workflow
- Print the workflow
- Export the workflow
- Upgrade the workflow, if permitted.
- Manually submit a [job](#) if the workflow is activated.

For detailed explanations of all workflow operations, see [Managing Workflows](#).

Controlling Workflow Status

This topic describes the four workflow status commands and how and when to change a workflow's status. You change the workflow status via menu items in the File menu or by using the buttons at the bottom of the main window.



Each state has a unique icon (or combination), as shown below, in the [Workflow States and Icons](#) table.

Note: With user administration enabled, only Vantage users with Administrator authority can lock workflows in an idle or active state to prevent unauthorized changes or deletion. To lock a workflow, select File > Lock Workflow or right-click on the workflow and select Lock. Workflow Designer displays a lock icon beside the workflow. Locked workflows can be activated and deactivated. However, they can't be edited, updated, or deleted. When user administration is disabled, anyone can lock or unlock workflows.

Edit—Select File > Edit Workflow or click the Edit button to modify the selected workflow. If the workflow is currently active (a Watch or [Receive action](#) is running and the workflow can process [jobs](#)), Vantage displays a warning dialog that it is about to deactivate the workflow. Click OK to continue. To edit or release multiple workflows at one time, see [Performing Batch Workflow Operations](#).

The Actions toolbar displays at the top of the panel when in design mode, so that you can add new actions to the workflow.

When you are editing a workflow, other Workflow Designer users can view the workflow, but cannot edit or activate it.

Release—When you're done editing a workflow, select File > Release Workflow or click the Release button. Released workflows can be activated, and can also be edited by others. To edit or release multiple workflows at one time, see [Performing Batch Workflow Operations](#).

Activate—Select File > Activate Workflow or click the Activate button on a deactivated workflow to start a Watch or [Receive action](#) so that jobs can be submitted and processed by this workflow. To activate or deactivate multiple workflows at one time, see [Performing Batch Workflow Operations](#).

Deactivate—Select File > Deactivate Workflow or click the Deactivate button to deactivate the workflow. New jobs cannot be submitted and media cannot be processed by the workflow in this state. Existing jobs using this workflow continue executing to completion. To activate or deactivate multiple workflows at one time, see [Performing Batch Workflow Operations](#).

The table below shows the icon or icons associated with a given workflow state, and provides a general description.

Workflow States and Icons

Workflow State	Icon	Description
Idle		Indicates that this workflow is not being edited, but it is not running either. To set the idle state, either click the Release button (when editing), or click the Deactivate button (when the workflow is active).
Editing		Indicates that the workflow is being edited by you. To edit a workflow, click the Edit button. When you are editing a workflow, it cannot accept media and others cannot edit it.
Active		Indicates that the workflow's origin action is currently executing and the workflow will accept media and start jobs. When a workflow is active, it cannot be edited.
Editing by other user		Indicates that the workflow is being edited (and thus, owned) by a different user.
Locked		The workflow has been locked. With user administration enabled, only users with Administrator authority can unlock it. Locked workflows can be activated and idled, but not edited, deleted, or updated.
Idle, locked		The workflow has been idled. With user administration enabled, only users with Administrator authority can unlock it. Locked workflows can be activated and idled, but not edited, deleted, or updated.
Active, locked		The workflow has been activated. With user administration enabled, only users with Administrator authority can unlock it. Locked workflows can be activated and idled, but not edited, deleted, or updated.

Managing Workflows

This topic describes how to organize, add, rename, and delete workflows and categories, change their states, and perform batch operations and other workflow-related operations.

Note: Whenever you are performing a workflow operation, you can select the workflow directly from the Workflow panel or select File > Recent Workflows, and select the workflow from the list.

- [Managing Workflow Categories](#)
- [Creating a New Workflow](#)
- [Renaming a Workflow](#)
- [Deleting a Workflow](#)
- [Moving Workflows Between Categories](#)
- [Finding or Filtering Workflows](#)
- [Duplicating a Workflow](#)
- [Exporting Workflows](#)
- [Importing Workflows](#)
- [Printing Workflows](#)
- [Performing Batch Workflow Operations](#)
- [Upgrading Actions After Installing a ComponentPac or Upgrading to a Newer Version](#)

Note: To set the status of a workflow, see [Controlling Workflow Status](#).

Managing Workflow Categories

Vantage provides workflow categories so that you can organize your workflows by categories that you design, and so that you can isolate and control workflows by Vantage user accounts (which is performed in the [Management Console](#)).

Note: Administrators can prevent Vantage specific users from seeing (and therefore using) workflows by category. To select workflow categories and specify which users have access to them, use the Vantage Management Console.

The following topics describe how to manage workflow categories:

- [Creating a Workflow Category](#)
- [Renaming a Workflow Category](#)
- [Deleting a Workflow Category](#)

Creating a Workflow Category

Create categories to store related workflows together.

Note: All workflows are stored in categories, so you must create at least one category before you can create a workflow.

To create a new category, do the following:

1. Select File > Create New Category, or right-click in the Workflows panel (left side of the main window) away from any categories or workflows, and select Create New Category to display the dialog of the same name:



2. Enter the name of the category you want to create, and click OK.

Workflow Designer creates the category in the [database](#), and displays it in the Workflows panel.

Renaming a Workflow Category

To change the name of a category, right-click on the category name in the Workflows panel and select Rename. Workflow Designer makes the text editable so you can change it. Press Enter or just click away from the field when you're done.

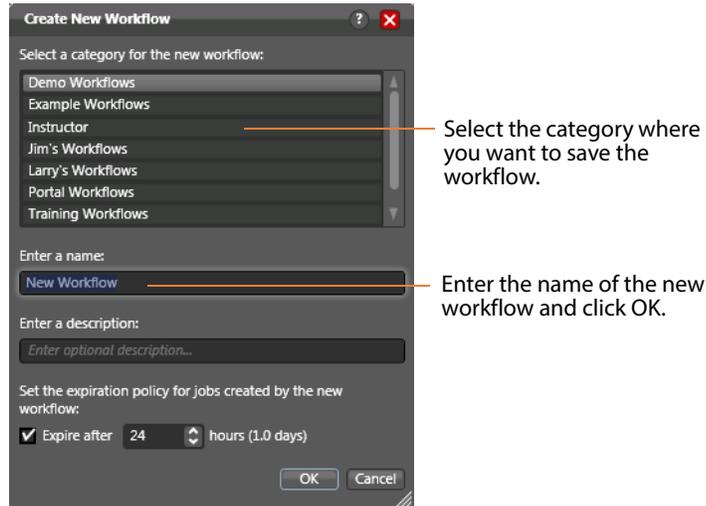
Deleting a Workflow Category

To delete a category, right-click on the category name in the Workflows panel and select Delete. Workflow Designer displays a warning that you are about to delete the category and all workflows stored in this category. Click OK to delete the category and its workflows, if any.

CAUTION: This action deletes all workflows in the category, and cannot be undone.

Creating a New Workflow

To create a new workflow, select File > Create New Workflow, or right-click in the Workflows panel (on the left side of the main window) away from any category or workflow and select Create New Workflow. Workflow Designer displays the Create New Workflow dialog:



Category—Select the category for this workflow from the list at the top.

Name and Description—Enter the name of the workflow you want to create and an optional description in the Name and Description fields.

Expiration Policy—If checked, specifies (in hours) the time that elapses before [job](#) records for jobs submitted by this workflow are deleted from the [database](#). The time for expiration is based on the last updated time in the job record—not the job submission time. Once the expiration period has elapsed, the jobs are subject to automatic deletion by the system.

OK | Cancel—Click OK to create the new workflow. Workflow Designer creates the workflow in the database, adds it to the specified category, and displays it in the Workflow Design workspace in edit mode—that is, deactivated and editable.

Renaming a Workflow

To change the name of a workflow, right-click on the workflow name in the Workflows panel and select Rename. Workflow Designer makes the text editable so you can change it. Press Enter or just click away from the field when you're done.

Note: You can only rename a workflow when it is in edit mode.

Deleting a Workflow

To delete a workflow, select File > Delete Workflow or right-click on the workflow name in the Workflows Panel and select Delete. Workflow Designer displays a warning that you are about to delete the workflow and all [job](#) history for this workflow. Click OK to delete the workflow and its history.

To delete multiple workflows at one time, see [Performing Batch Workflow Operations](#).

CAUTION: This action deletes the workflow and its job history, and can't be undone.

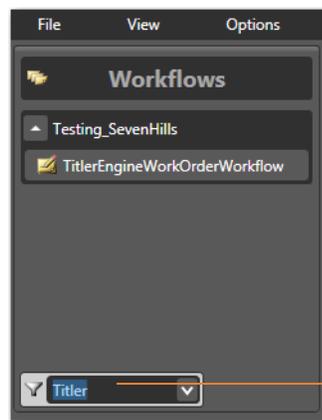
Moving Workflows Between Categories

To move a workflow from one category to another, select File > Move Workflow or right-click on the workflow and select Move. Workflow Designer displays a Category dialog. Select the category you want to move the workflow to, and click OK.

To move multiple workflows at one time, see [Performing Batch Workflow Operations](#).

Finding or Filtering Workflows

To find a workflow by name—or to filter workflows by some phrase or string value in its name—use the Filter icon in the bottom left corner of the Workflows panel.



Use the Filter display only workflows with the specified phrase or string.

Enter a phrase or string, or select a previously-entered string. Workflow Designer displays only those workflows that meet the filter criteria. Delete the string to return to a complete display of all workflows in the domain.

Duplicating a Workflow

To duplicate a workflow, select File > Duplicate Workflow or right-click on the workflow and select Duplicate. Workflow Designer displays a Category dialog. Select the category you want to create the new workflow in, enter a name, and click OK.

Exporting Workflows

When you export workflows, the following items are also exported, if they are used in the workflow:

- Media nicknames
- [attachment nicknames](#)
- Variables
- Metadata labels
- Stores
- Output folders

Exporting a Single Workflow—To export the selected workflow, select File > Export Workflow or right-click on the workflow and select Export Workflow. Workflow Designer displays a File System dialog. Navigate and select the location where you want to save the workflow XML file, and click Save. Workflow Designer exports the workflow as an XML file.

Exporting Workflows by Category—To export all workflows in a given category, select File > Export Workflows by Category. Workflow Designer displays a dialog with all categories listed. Check the ones you want to export, and click OK. In the File System dialog, navigate and select the location where you want to save the workflows. Optionally, create a new folder, and click OK.

Workflow Designer creates a folder for each category in the domain, then exports each workflow in each category, as an XML file.

Importing Workflows

You can import workflows which have been previously exported (as XML files) from this or other domains.

You can import workflows into your domain that have the same name as another workflow in a different category. However, if you import a workflow into a category which already has a workflow with the same name, Vantage assigns the imported workflow an incremental copy number. You can't have two workflows of the same name in the same category.

Importing a workflow can create a problem with duplicate variables: The variable already exists, but the imported variable has a different default value. When this happens, the original value remains intact.

Note: You cannot import a workflow that includes any [action](#) whose service is not running in the domain.

To import workflows, use any of the following options:

- [Importing Workflows into a Category You Select](#)
- [Importing Workflows by Category](#)
- [Importing Workflows into a Specific Category](#)

Importing Workflows into a Category You Select

Use this method when you want to select the workflow or workflows, and then select a category or create a new one:

1. Select File > Import Workflows.
Workflow Designer displays a File System dialog.
2. Navigate to the directory where the previously exported workflows are located.
3. Select one or more workflows and click Open.
Workflow Designer displays the Import Workflow Category dialog.
4. Select the category or check Use Folder Name to create a new category and click OK.
Workflow Designer imported the selected workflows into the category.

Importing Workflows by Category

Use this method when you want to import a category or categories of workflows (for example, when importing all workflows you've exported from another domain). The workflows you are import should be organized into folders, with the folder name being the name of the category you want to use or create.

To import workflows by category, follow these steps:

1. Select File > Import Workflows by Category.
Workflow Designer displays the File System dialog.
2. Navigate to the directory directly above the folders of exported workflows (where each folder is named the same as the workflow category) and click Select Folder.
Workflow Designer displays the Import Workflows by Category dialog.
3. Check each folder that you want to import the workflows from and click OK.
If a category already exists in this domain, the workflows in that folder are imported. If the category does not exist, a category of the folder name will be created, and the workflows imported.

Importing Workflows into a Specific Category

Use this method when you want to import selected workflows directly into a specific category:

1. Right-click on the category title in the Workflows panel, and select Import Workflows.
2. Navigate to the directory where the previously exported workflows are located.

3. Select one or more workflows and click Open.

Workflow Designer imports the workflow into the selected category. You can now rename and edit the workflow as appropriate.

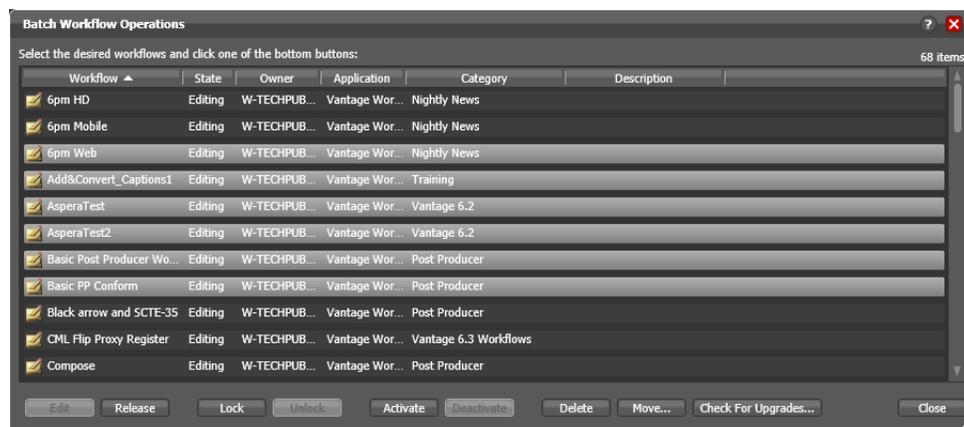
Note: When importing workflows that have been created and exported from another domain, you may end up with duplicate variables in your domain. For example, you might end up with two *Agency* variables. This is typically not a problem. However, to determine which workflows use a particular variable—so that you can correct them to use only one definition of it—go to the [Management Console](#) > Workflow Design Items > Variables. Select the variable you want to search workflows for, and click the Find Workflows Using this Variable button in the toolbar (5th from left).

Printing Workflows

Select File > Print Workflow to print the selected workflow using the current workflow settings. The workflow is scaled to fit on a single page (with landscape or portrait mode preset based on workflow shape), unless the workflow is sufficiently large to make it difficult to read when scaled to a single page. Then, Workflow Designer provides you the option of printing across multiple pages.

Performing Batch Workflow Operations

You can select multiple workflows and initiate these tasks: edit/release, lock/unlock, activate/deactivate, delete, move, or upgrade actions. Secured Version Control allows you to upgrade workflows or lock workflows to prevent upgrades until you are ready.



Note: This feature is enabled only by users with Administrator privileges.

To change the status of (or operate on) multiple workflows, do the following:

1. Select File > Batch Workflow Operations.
 Workflow Designer displays the Batch Workflow Operations dialog, which lists every workflow in the domain.
2. Select one or more workflows (using shift and control keys).
3. Click one of the buttons at the bottom of the dialog to perform the task.
4. When you're done, click Close.

Upgrading Actions After Installing a ComponentPac or Upgrading to a Newer Version

During a Vantage upgrade (you are converting your domain to a newer version) or after installing a ComponentPac, some actions may have new or modified extensions—for example, a Flip action with an updated WMV encoder, or an [Analyze action](#) with a new filter. You can update the copies of these actions in your existing workflows as well, although you are not required to.

Actions implemented by the following Vantage services can be upgraded:

- Analysis
- Edit
- IPTV VOD
- Monitor
- Multiscreen
- Timed Text Flip
- Traffic
- Transcode

Actions with only changes to the [action](#) itself (a new check box, for example) upgrade automatically, when new versions are installed. When you open a workflow, Workflow Designer, checks to make sure that the actions are current. If not, the action's title displays in italics to indicate that you can upgrade it.



Note: In addition, you can hover over an action to display the tooltip, which indicates which ComponentPac version is being used.

Right-click the action and select Upgrade to upgrade it. Or, right-click outside of an action and select Upgrade to upgrade all upgradeable actions in the workflow. Then, open the inspector and review your configuration, making changes as appropriate, based on the action's new or changed controls.

The Upgrade menu item is hidden when there are no upgrades available (for any actions in the workflow). The Upgrade menu item is grayed out when upgrades are available, but can't be performed now (for example, when the workflow is not editable).

To upgrade multiple workflows at one time, see [Performing Batch Workflow Operations](#).

Note: Once an action is upgraded it can't be directly downgraded. However, you can restore workflows to their pre-upgraded state by importing the automatic backup copy that Vantage places in the C:\VantageWorkflowBackup directory (local to the Workflow Designer client). Beginning with Vantage 7.0 UP1, a log file describing the upgrades is also included in that directory.

Constructing Workflows

The following topics describe the operations you'll use to construct workflows, which is done by creating actions, arranging them in order of execution, and connecting them together. One operation—exporting an [action](#)—can only be performed on [Flip actions](#). It is used in conjunction with implementing an SDK-based Vantage application.

Note: Before you can edit a workflow (work with actions or change configuration), it must be deactivated and editable. When you first create a new workflow, Workflow Designer places it in edit mode automatically.

- [Adding Actions](#)
- [Controlling the Order of Action Execution](#)
- [Deleting Actions](#)
- [Removing Line Crossings](#)
- [Re-ordering Actions](#)

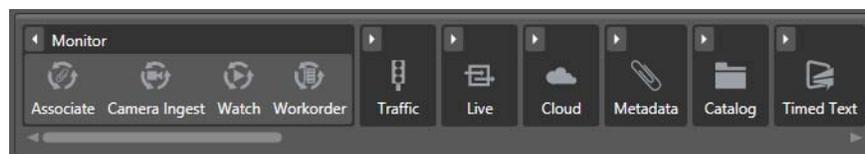
Adding Actions

There are several ways to add actions to a workflow, depending on the situation.

New action—to add an un-configured [action](#), open the appropriate category in the Actions toolbar and drag the desired action onto the design area. When you drag an action from the toolbar, it must be configured before you can use the workflow.

Action template—many actions have action templates—pre-configured actions that make it easier to assemble workflows. Vantage provides many built-in action templates, and you can also make and use your own. For details, see [Creating Action Templates](#).

To add an action template, click on the action in the action group, select an action template from the list, and drag it onto the workflow. The configuration of a template may be exactly what you need, or you may need to make minor configuration changes.



Copy and paste—to copy and paste actions in a workflow, first right-click the action you want to copy and select Copy. To select multiple actions, control-click and drag across the desired actions in the design work space.

Next, right-click on the design area, right-click and select Paste to add the copied action or actions to the workflow.

To paste an action's *configuration* into an action of the same type, right-click and select Paste—this configures the action identically with the copied action.

Note: An [origin action](#) (Watch or [Receive action](#)) is required as the first action in a workflow, even if you plan to manually submit [jobs](#) to this workflow.

When you drag an action onto the design area, Vantage may automatically align it near where you dropped it (unless auto-arrange is off; see [Automatically Arranging Workflow Actions](#)). Until you connect an action to other actions, you can move it anywhere you want on the work area. If you bump the action you're adding right next to an existing action, Workflow Designer will automatically connect the two.

Generally, it's easiest to drag and drop actions in a pattern similar to the flow of the desired workflow, working from left to right (on each branch, if more than one). However, you can drag actions anywhere, and connect them as desired later.

Vantage will tidy up actions—moving them and organizing them by column. Once an action is connected, you can move it vertically (up or down) but it cannot be moved from its column. Alternatively, Vantage can also attempt to optimize the workflow, removing as many line crossings as possible.

Controlling the Order of Action Execution

You connect actions together linearly in a workflow to control the order of execution relative to other actions in the same workflow, and to control the flow of variables and files from one [action](#) to another.

Job execution proceeds action by action, from left to right: When a workflow executes, the [origin action](#) (at the far left) executes first to start the [job](#), and each action following the previous action executes next.

Connecting Your Actions Together

You connect actions together from the output pin (right-side) of one action to the input pin (left side) of the action you want to execute next in the workflow.

Actions can only be connected from an output pin (on the right side of the action) to an input pin (on the left side of the action), and control (file or logic) flows from output to input—from left to right.

Here are ways you can connect actions together:

- Click and drag a connecting line from one connector pin to another
- Click and drag an action (either from the actions toolbar or one already in the work area) and bump it into the edge of the action you want to connect it to—until a pale blue vertical line displays. (You must drag your mouse pointer up to the edge of the action you're connecting to).
- Copy an action, and right-click on a connector line and select Paste to add the copied action between the two actions. Or, drag an action onto a connector line until it displays as a larger line. Then, drop it to connect it between the two actions.

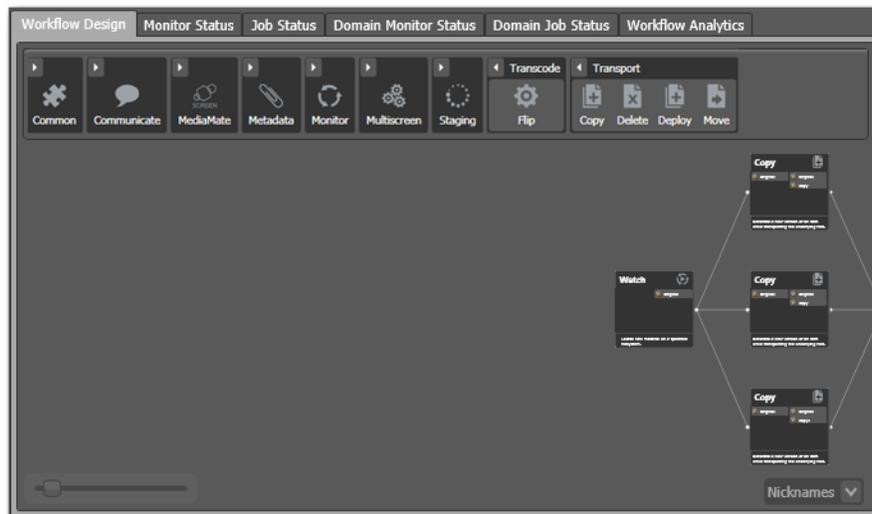
Certain connections are not permitted:

- You cannot form recursive loops, by connecting actions to themselves or to the input of preceding actions in the workflow.
- You cannot connect one input (left) pin to another input pin, or one output pin (right) to another output pin.

Note: When you connect actions by clicking and dragging a connection, Workflow Designer can display a popup message that provides connection details. To enable or disable this feature, select Options > Show Connection Helper.

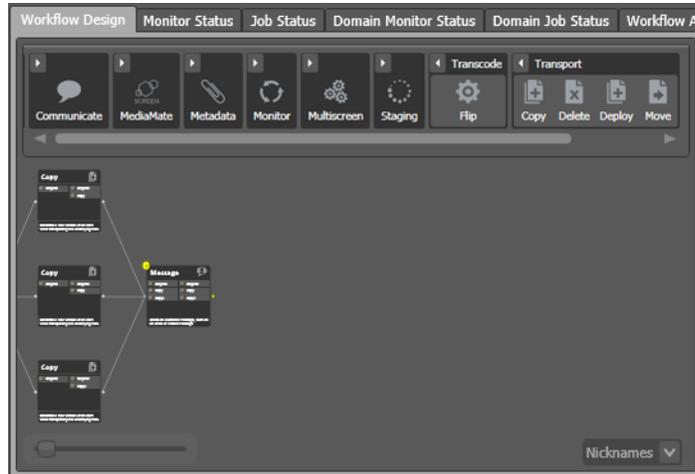
You can connect one action to multiple succeeding actions, creating logical branches, as shown in the figure following. When you do, none of the actions you connect can execute before the preceding action upon which they depend completes.

When you have branches in a workflow, you can optionally, use a [Synchronize action](#) as a visual connector at either end of the branches, to better organize them. Synchronize does not perform any special task, it merely aids in design. In this example, three [Copy actions](#) execute in parallel after the Watch action completes.



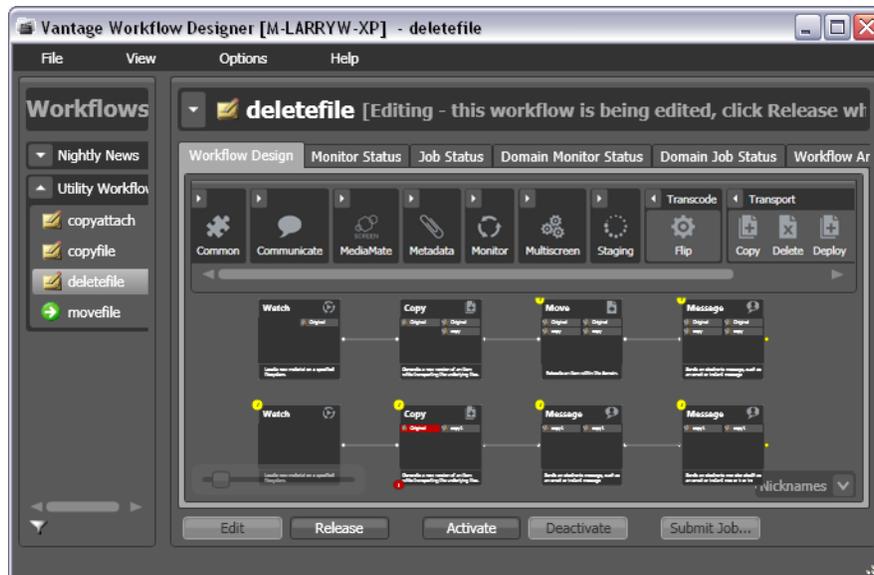
These three [Copy actions](#) execute independently of each other, and their start time and completion time relative to each other is non-determinant. They execute in parallel from the perspective of the actions which precede and follow these actions.

You can also connect multiple actions (branches) back to a single succeeding action, as shown in the following figure. When you do, each of the actions you connect must execute before any succeeding **common action** can execute.



In this example, all Copy actions must execute before the Message action executes.

You can also create multiple, independent action branches—each branch starting with an **origin action**. Each origin action creates its own job. Although this is not generally recommended, you may have situations where it is the best solution.



In this example, two independent sets of actions are in this workflow. As each **origin action** detects new files to process, a separate job is initiated.

Note: Although this is a legitimate workflow, it is an unusual configuration. Typically, two completely independent processes would be better defined as two separate workflows.

Deleting Actions

To delete an action, select it and press Delete or right-click the action and select Delete. When you delete an action, Workflow Designer connects the preceding and succeeding actions, unless you uncheck Fill connections after delete in the Delete confirmation dialog.

To select multiple actions, control-click each additional action or control-click and drag across them in the design work space. When the appropriate actions are selected, delete them using one of the following options:

- Press Delete.
- Right-click one of the selected actions, and select Delete.

Removing Line Crossings

On occasion, you might connect two actions on rows in the layout that are more than one row apart—resulting in an unintended line crossing. To manually optimize the workflow layout, select View > Remove Line Crossings or right-click and select Remove Line Crossings. Workflow Designer reformats the workflow and optimizes the layout of the actions in a grid.

Re-ordering Actions

To re-order actions vertically, drag one or more of the actions up or down in the design area to the location where you want it. To select multiple actions, control-click each additional action or control-click and drag across them in the design work space. Workflow Designer adjusts the other actions to accommodate the manual placement of the other [action](#).

Configuring Actions

Each [action](#) (except the [Synchronize action](#), which is simply a common connecting point) has a specifically-designed action [Inspector](#)—which you use to configure the action to perform its task in a particular way.

Most action inspectors use the Wizard model; a series of one or more panels, with standard Previous, Next, Finish, and Save buttons.

Some action inspectors—specifically, the Flip action, and other Telestream Media Framework-based transcoding actions such as the Multiscreen action—display the entire inspector in a single, multi-paneled window.

The panel's organization and the layout of building blocks is pretty simple. The different controls in editor panels is insignificant. What matters is that you use the panels to select inputs, encoders, and outputs and configure filters, select nicknames, and make other selections specific to the formats you've chosen.

- [Displaying the Action Inspector](#)
- [Using the Flip Action Inspector](#)
- [Using the Telestream Media Framework Action Inspectors](#)
- [Using the Filename Pattern Editor](#)

Displaying the Action Inspector

To access the action inspector on any action, choose one:

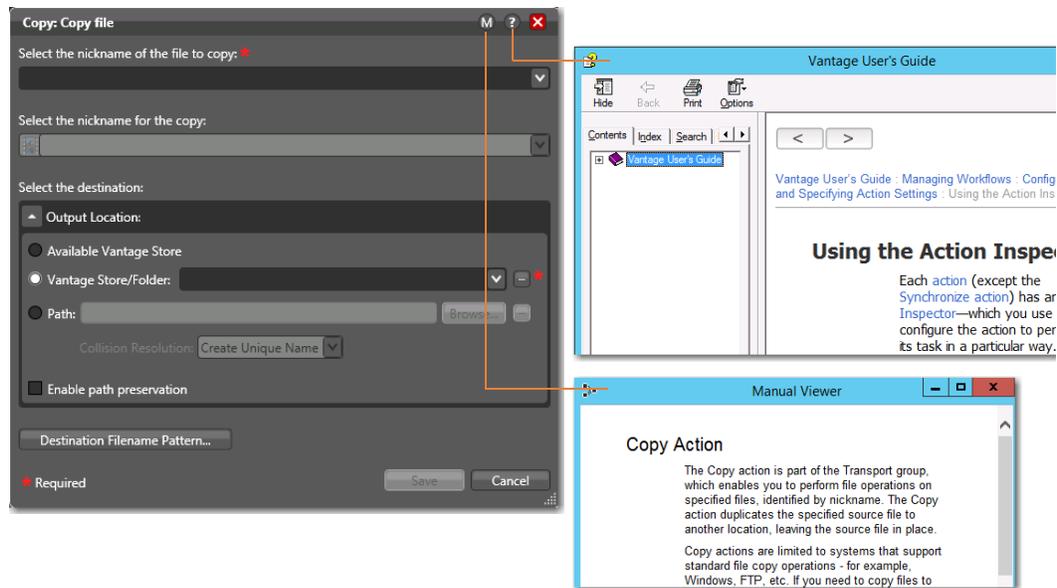
- Click the inspector button (the round *i* button), which displays on the upper left corner of each action
- Double-click the action
- Right-click the action and select Configure.



Unconfigured actions display their inspector button in yellow to alert you to a problem.

Until an action has been configured (or configured *correctly*), the inspector button displays yellow; a workflow cannot be activated until all actions have been configured correctly and no yellow inspector icons display. When an action is correctly configured, the inspector button disappears. Hover over the top left corner to display it—a correctly configured action displays a blue inspector button. If you hover directly over the button, a summary of the action displays.

The inspector panels vary, depending on the type of action, and the configuration choices you make. For example, here is a simple inspector—the inspector to configure a [Copy action](#):



However, the inspector for a [Watch action](#) typically consists of about 7 or more panels, depending on the file system you're configuring it to monitor.

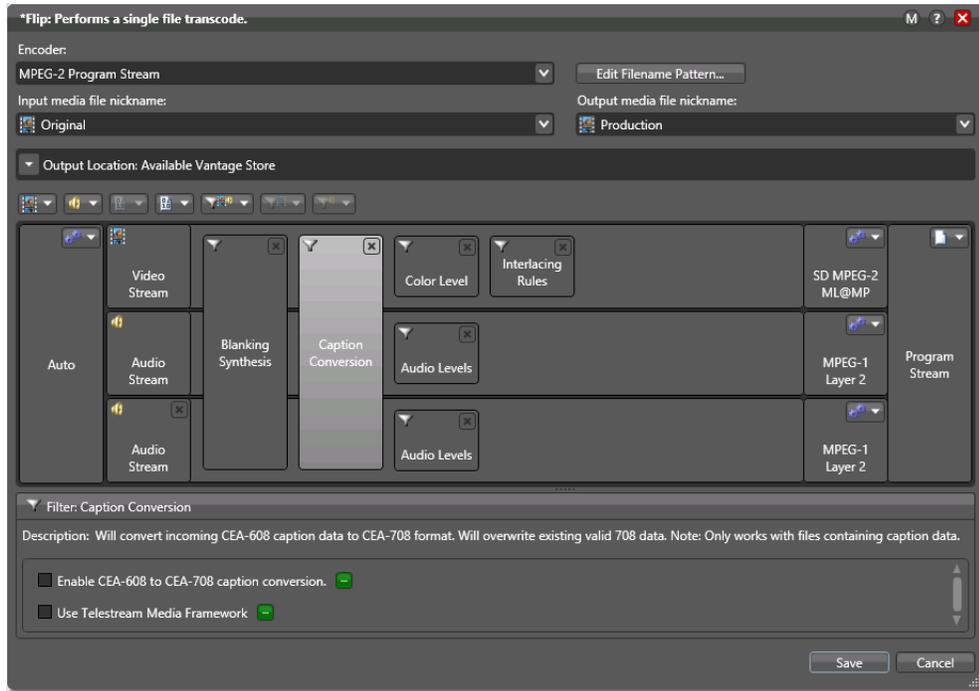
When you're viewing an inspector of an action in a workflow that is activated or someone else is editing it, the term *Read Only* displays in the inspector's title bar. Also, if you have changed the configuration, an asterisk (*) displays immediately before the action name: For example, **Watch*.

Note: Detailed, context-specific help (as shown above) is available on each inspector panel: Click the **M** icon to display its man page. Click the **?** icon to display this topic (the one you're currently reading) in the *Vantage User Guide*. Once in the guide, you can also search for other topics. You can also hover over any control for a tooltip.

Using the Flip Action Inspector

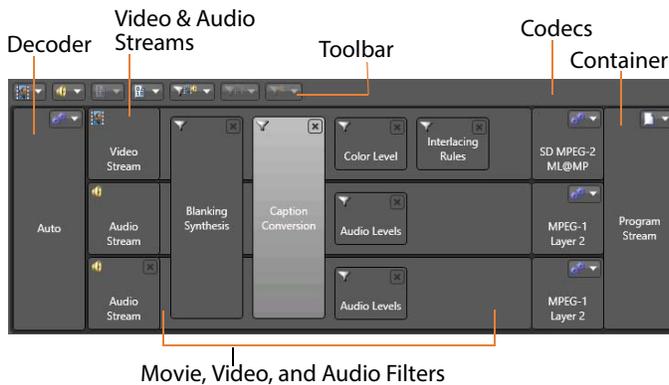
The Flip action inspector is unique in Vantage, and comprehensive. It contains a variety of general settings, a graphic representation of the transcoding process comprised of

building blocks, and a settings detail panel for configuring each building block the way you require it for your application.



The general Flip action controls at the top of the inspector window enable you to select an encoder and create a file name pattern for naming the encoded file (for details, see [Using the Filename Pattern Editor](#)). You must specify an input and output media nickname. You use the Output Location controls to specify where to write the output media file. For details, see the man page.

The media file panel is comprised of building blocks, and a toolbar for adding other streams and filters.



Here are the building blocks (ordered left to right):

- *Decoder*—on the left edge of the stream panel; you can use the auto decoder or, under certain circumstances, select a specific decoder for specialized decoding.
- *Video and Audio Streams*—to the right of the decoder, as supported by the selected encoder.
- *Movie, Video, and Audio Filters*—a wide variety of filters, overlaid on video and audio streams; added using the toolbar.
- *Codecs*—at the right side of the video and audio streams, listing all supported codecs for the selected encoder.
- *Container*—at the far right of the stream; specifies the container /file format for the media.

Below the stream panel is the setting details panel. It displays the settings for the selected building block: decoder, various movie, video, and audio filters, codecs, etc. In this example, the Caption Conversion filter is selected and its controls display in the setting details panel.

Using the Media Stream Toolbar

Use the icons in the toolbar to add streams and filters; the list varies by encoder.



To add any supported type of stream for the encoder, select it from the toolbar. To add a filter, select the video stream or audio stream and then add the selected movie, video, or audio filter from the list.

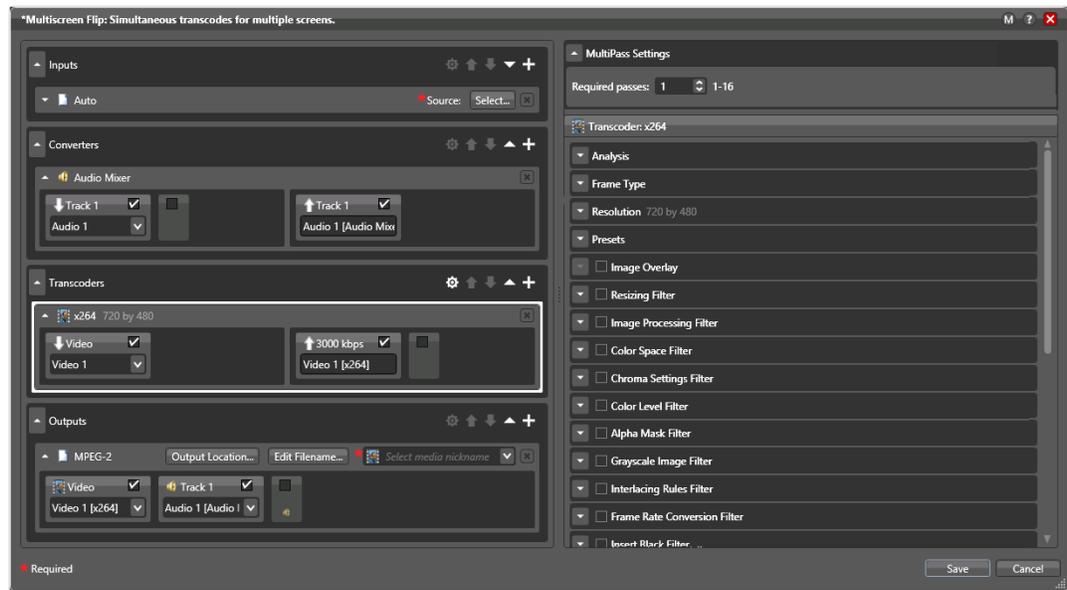
If you directly click on the icon, it will add the next available filter at the top of the drop down list. If you click on the menu arrow on the right side of the icon, the list will display and you can select the appropriate filter.

To remove any building block, select it and then click the Delete icon or just select it from the list again.

Using the Telestream Media Framework Action Inspectors

Vantage includes several Telestream Media Framework transcoding actions, including Multiscreen Flip, IPTV VOD Flip, Post Producer Conform, and others. Each action's inspector is designed to enable you to specify the discrete components required in an action's functionality (inputs, converters, transcoders, etc.) on the left side, and detail

panels for configuration of the selected components (and the streams inside them) on the right.

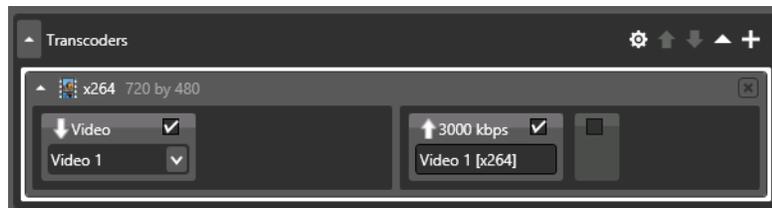


Each type of action's components vary. The categories are represented by a panel—in this example there are four categories of components: Inputs, Converters, Transcoders, and Outputs. You can add one or more components to each category, depending on the action. For example, in the Multiscreen Flip action you can add several input processes, an Audio Mixer Converter, one or more transcoders and one or more outputs.

To remove any component, select it and then click the Delete icon.

Configuring Components

Each component you add displays its own panel, including the video and audio streams, as appropriate.



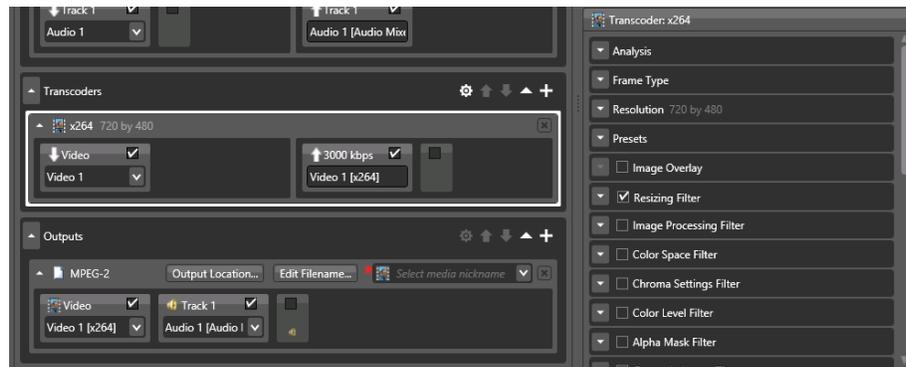
To configure the component, click to select it (as shown above, with the white border).

The setting details panel displays on the right, enabling you to configure it.

Use the same process to configure each video and audio stream.

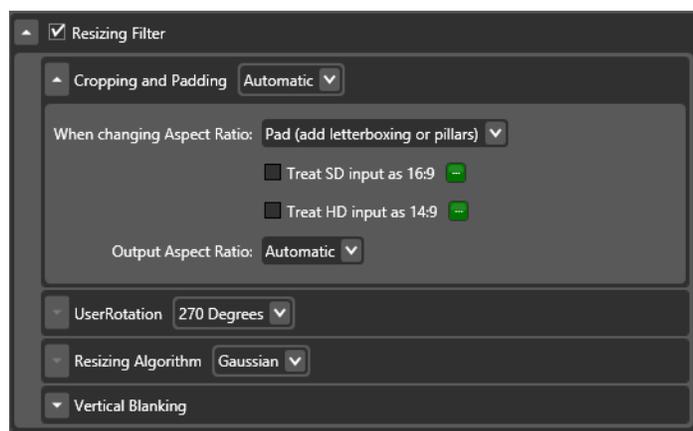
Specifying and Configuring Transcoder Filters

Transcoder components enable you to specify filters that you want to enable. To manage filters, select the transcoder. The inspector displays the filters in the settings detail panel on the right.



Check each filter that you want to enable.

To configure the component, click the expander button to display its settings.

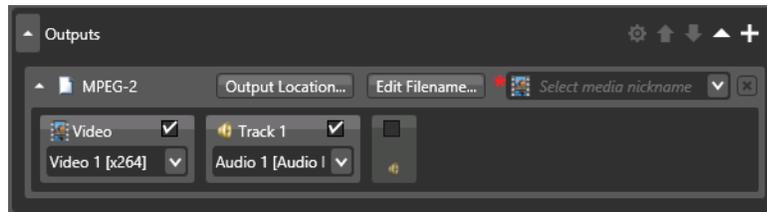


Configure the settings as required to accomplish your workflow requirements.

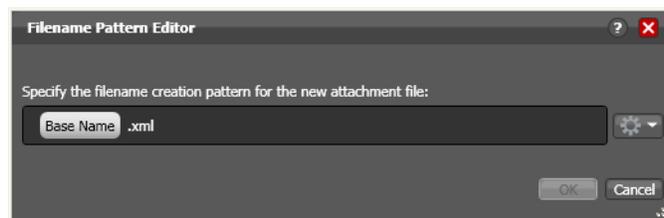
Using the Filename Pattern Editor

Actions that create new files provide a filename pattern editor, so that you can customize the pattern for file name generation, based on the task and the workflow requirements. The filename pattern editor is implemented in transcoding actions such as Flip, IPTV VOD, and Conform, and in file operation actions, including Move, Copy, etc.

Here's an example—the Edit Filename button—displayed in the Outputs panel of one of the actions:



To display the editor, click the Edit Filename button:



Use the editor to implement a filename generator pattern for your workflow. To produce the name generator pattern you require, you can include raw text (for example, *.xml*) and any combination of the following: base name, any supported variable you want to select, plus date and time.

Note: In all transcoding actions, the Base Name element is the base name of the source file without the extension (for example, *myfile* for a file named *myfile.mpg*). In file operations actions (Copy and Move, for example), the Base Name is the full name of the file, including the extension. For example, *myfile.mpg*.

Binding Settings to a Variable

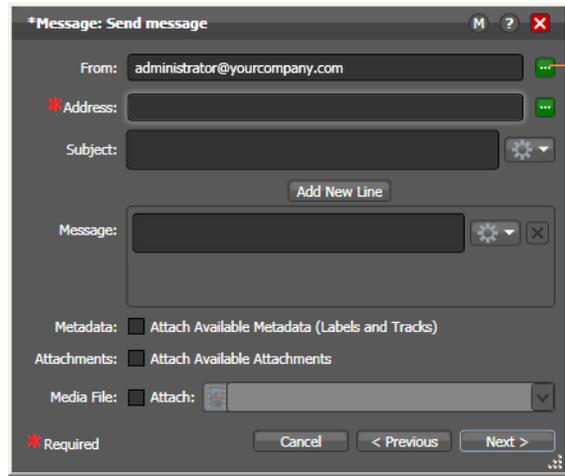
Most settings in an action are configured with a static value—one that doesn't change from [job](#) to job. For example, you configure a Watch action to poll a specific directory—and job after job, this directory never changes—that is, the fully-qualified path string is a *static* value.

However, many [actions](#) also have settings whose values *do* change from job to job—typically, based on the media being processed.

For example, you have a Message action that sends email—the To address should be the address of the producer, which is provided in metadata and assigned to a variable in a previous action. Or, a variable is updated by an Analysis action to specify the number of black lines are at the top of a frame; a crop filter in the workflow uses the variable to crop the video appropriately for that job.

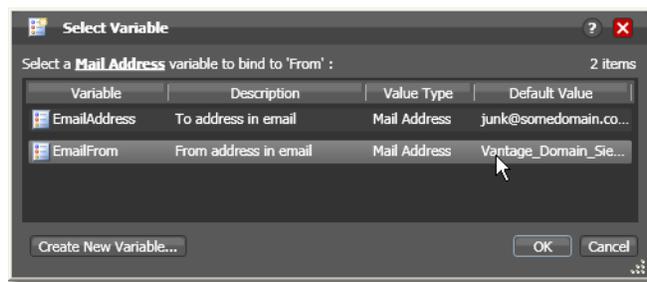
To support dynamic values, Vantage enables appropriate settings to be bound to a variable, allowing the workflow to dynamically update the value on a job-by-job basis.

Settings that can be bound to a variable display a green Browse button:



Click the green variable browse button to select a variable to supply the variable's value to this control. In this case, an email address.

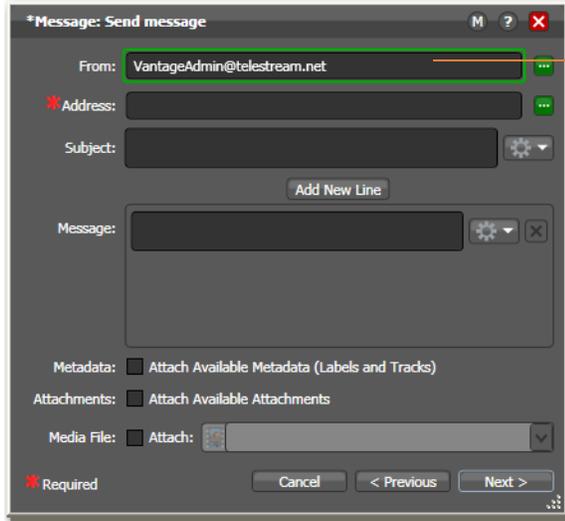
Click the green Browse button to display the Select Variable dialog, shown here.



The list of variables includes those variables of the appropriate type (text, true/false, etc.) in the domain. For example, the subject line only accepts text variables; the email address only accepts email address variables.

Select the variable to bind to this setting, and click OK.

Note: Click Create New Variable to if you need to make a new one. For details, see [Creating New Variables](#). (You can also create variables in the Management Console.)



Settings bound to a variable display a green border. Click the button again to unbind a variable or change the variable you want to use. You can hover over a bound setting to display information about the binding—for example, the name of the variable.

Now, the setting displays with a green border, indicating that its value is derived from the current value of the variable instead of the setting (in the case of a check box or radio button) or a manually-entered or selected static value.

When you bind a setting to a variable, the value or state displayed is the default for the variable definition in the domain and the value is read only. If you remove the binding, the value returns to the setting's original editable value.

Specifying Action Settings

The following topics describe how to specify action settings. These settings are all accessed by right-clicking an action and selecting the setting from the context menu.

- [Setting Conditional Action Execution](#)
- [Adding Variables to an Action](#)
- [Configuring an Action's Run On Rules](#)
- [Configuring an Action's Fallback Rules](#)
- [Specifying Automated Retry Settings](#)
- [Modifying Resource Costs](#)
- [Generating Execution Metrics](#)
- [Changing Action Descriptions](#)
- [Highlighting a Branch in a Workflow](#)
- [Creating Action Templates](#)
- [Exporting a Flip Action](#)

Note: Not all actions provide each of these settings.

Setting Conditional Action Execution

The [action state](#) describes the condition of an action during execution or after completion. During execution, an action may be in a variety of states, as indicated by a colored border (for a detailed list, see the jobs table's [Viewing Actions in Detailed Action View](#)).

You can configure most [actions](#) to only execute when the upstream action or actions pass a specific [action state](#) to the downstream action. Obviously, you cannot test action states or set conditional execution in [origin actions](#)—the first actions of a workflow—Watch, Receive, Dublist, and the [Workorder action](#), for example.

- [Action States Overview](#)
- [Setting The Execution Action State](#)

Action States Overview

After execution, an action's final state is assigned: Success | Ignore | Fail. These keywords may be tested by the action immediately following it (using the Perform On function—see [Setting The Execution Action State](#)), to determine whether or not this action should execute. Each action's final (post-execution) state is passed to the next action or actions in the workflow.

If an action fails, the next action inherits the Fail action state and (in most cases) will not execute—unless its Perform On state is set to Fail.

Some actions can be configured to set the Ignore state. The next action inherits the Ignore state and will likely not execute (unless it has been explicitly set to execute on Fail). Most actions, such as Message, can be configured to perform on certain states—this allows workflows to send an email if they detect a failure.

If an action receives states from two incoming actions (such as a merge of two branches), then states are given the following priority:

- If at least one incoming state is Fail, regardless of other incoming states, the action will inherit the Fail state—Fail has precedence over all action states.
- If there is no Fail state, but at least one Success state, then the action will inherit the Success state—Success has precedence over Ignore states.
- Only if all incoming states are Ignore, will the action will inherit the Ignore state.

Ignore has lowest precedence of the three states.

Setting The Execution Action State

To set the conditions (states) under which an action will execute, right-click and select Perform On > Success | Failure | Ignore | Any. The Any option is not a state—it is a selection to indicate this action should execute regardless of the state passed to it.

By default, actions only execute when the [action state](#) (as set by upstream actions) is Success. Success means that the upstream actions have completed normally and the incoming state is Success.

The Fail state indicates that at least one action has executed and failed to complete normally or completed normally, but was explicitly set to Fail. If you have an action configured to execute on Fail, it only executes if at least one upstream action has reported a failure.

You can also configure an action to execute on the Ignore state by selecting Ignore.

Adding Variables to an Action

Sometimes, you need to provide information to one or more actions (or directly to a job, when you're manually submitting it) that is independent of the functionality of the actions. To do so, you can manually add a variable and set a static value. These variables can be used by downstream actions or by other Vantage components such as services, to execute the workflow appropriately.

For example, you can add a variable to set the execution priority of one workflow branch to high, and another to low.

- [Variables Overview](#)
- [Adding Variables](#)
- [Creating New Variables](#)

Variables Overview

In Vantage, a variable is a container for temporary [job](#) information—a symbolic name (or identifier) which contains some data: a quantity, string, or element of information; a value. You use the variable name to reference the current value; this separation of name and content allows the name to be used independently of the information it references.

Each variable has a name (such as *Number of Audio Channels*), a type (*Integer Number*, for example), and a default value, all of which are defined when the variable is created.

Note: To display variables used in your actions, in detailed action view, select View > Action Details > Variables or select Variables from the menu in the bottom right corner of the Workflow Design panel.

You can change variable values in a variety of ways. For example, a variable value can be changed in actions that are designed to use variables, such as the Analysis, Populate, Watch and [Associate actions](#). Variable values can also be changed when adding a variable to an action in a workflow or when manually submitting a job.

Variables are passed from action to action according to the action connections. When an action creates a given variable, all downstream actions that use variables can access the variable and its current value.

Variables are used by some actions to control their functionality and execution—and thus, implement workflow logic. (Variables are also used by Vantage services as defined by the [Vantage domain](#) administrator.)

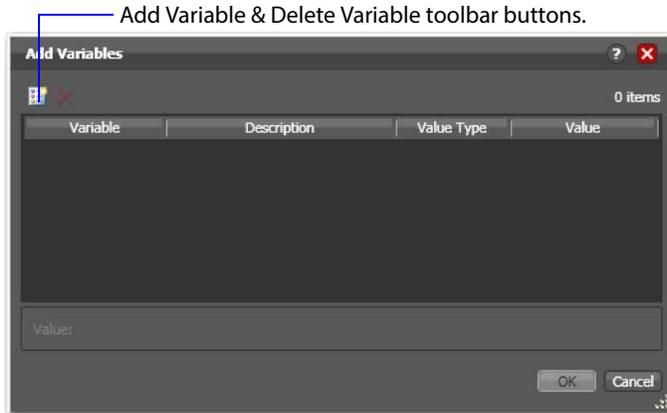
Many settings in an action can be *bound* to a variable, allowing the workflow to dynamically update the settings on a job-by-job basis. For details on binding settings to variables, see [Binding Settings to a Variable](#).

When a variable is set to a specific value, that variable value is only available to actions within the same branch as the one that set the variable and actions in downstream branches.

Note: If two branches merge to a [common action](#), and both have set a value for the same variable, then the last upstream action to finish executing will set the variable for the common action. The last action to finish can not be determined from job to job.

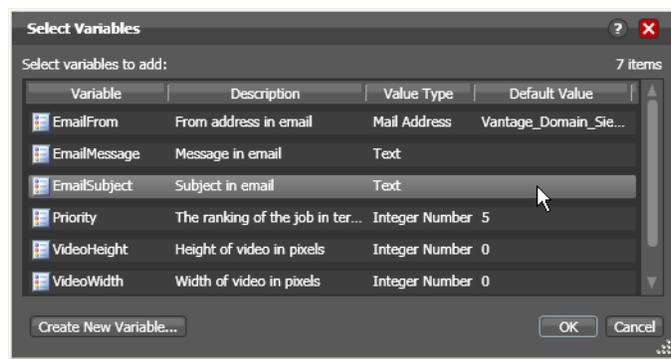
Adding Variables

To manually add a variable to an action, right-click and select Add Variables. Workflow Designer displays the Add Variables window.



In the Add Variables window, you can add variables to the action prior to execution. Values set in this window are available to this action, and all downstream actions (including actions in connected workflows).

Click the Add Variables button in the toolbar to display a list of variables.



Select the variable to add and click OK.

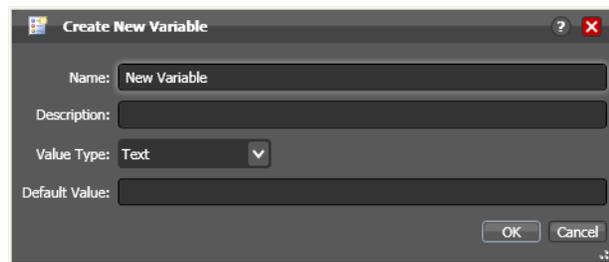
Note: Click Create New Variable to create a variable if you need a new one. For details, see [Creating New Variables](#).

Next, with the variable selected, modify its default static value if necessary, and click OK to add it to the variable for use in the workflow.

Creating New Variables

Vantage includes some default variables, and you can create variables directly in Workflow Designer. [Vantage domain](#) administrators can also create variables using the Vantage [Management Console](#) (Workflow Design Items > Variables).

On variable selection windows in Workflow Designer, click the Create New Variable button. Workflow Designer displays the Create New Variable dialog shown here.



Configure the new variable as follows:

1. Enter an appropriate name for the variable in the Name text box.
2. Enter a description in the Description text box. (This is optional.)
3. Select a variable type from the Value Type dropdown list.
4. Enter a value for this variable in the Default Value text box.
5. Click OK to save the variable.

Configuring an Action's Run On Rules

Most actions have a set of rules called [run on rules](#), which can be configured to determine if its service has the features or characteristics which enable it to execute the action. Unlike [qualification rules](#), which are service-centric, run on rules are action-centric.

Note: To display run on rules used in actions in your workflow, in detailed action view, select View > Action Details > Run On Rules or select Run On Rules from the menu in the bottom right corner of the Workflow Design panel.

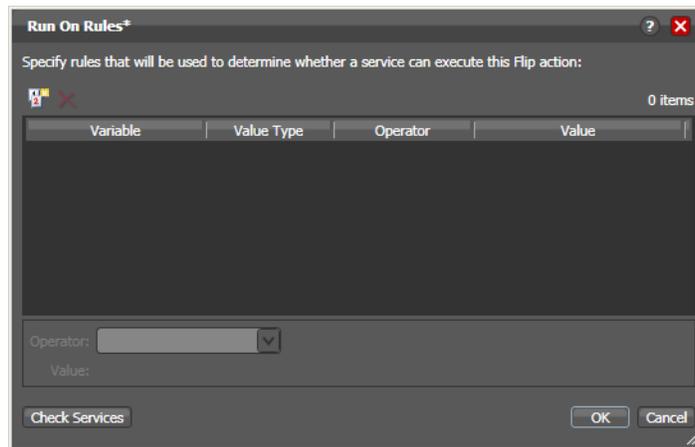
Run on rules provide explicit control over which service can execute a particular action in a workflow. As you design a workflow, you can indicate that you need to have a particular action executed by a specific service (or set of services). To implement this, you assign a True/False variable the value of TRUE to indicate that the service must satisfy the requirement. Assign this variable to the service or services that qualify, in the Vantage Management Console > Services > Variables.

For example, you are designing an HD transcoding workflow, and the [Flip action](#) must be executed by a Transcode Service deemed HD-capable—that is, it is running on a server with a processor set capable of adequately handling HD media transcoding. For this example, it's a server named *Vantage_HD_Transcoder*.

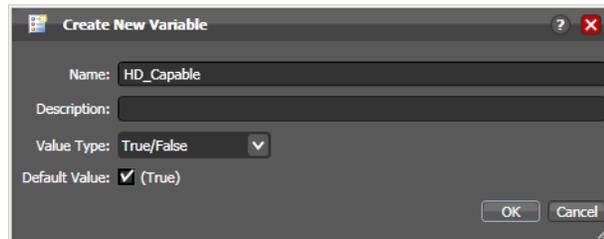
Note: In addition to setting up specific rules on an action, [Vantage domain administrators](#) can set up service-based qualification rules using the [Vantage Management Console](#).

Creating Run On Rules

In Workflow Designer, open your HD workflow, right-click on your Flip action and select Run On Rules to display the Run On Rules dialog.



Click the Add Run On Rules button in the toolbar at the top, and create an *HD_Capable* variable and set its value to TRUE, as shown below.



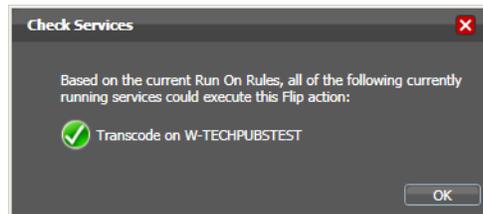
Next, click OK to create this variable, and click OK to save the Run On Rule.

In the Vantage [Management Console](#), select Services > Variables and add the *HD_Capable* variable to the Transcode Service running on the Vantage_HD_Transoder server.

Note: When a variable is added to a service, that variable is added to the job if the service executes it. Be careful about which variables you use for [run on rules](#), and which are used for decision-making; generally you will want to use different variables. Run on rules *only* analyze variables explicitly set by a service. They do not analyze variables already set in a job. This ensures that run on rules only execute actions on a service that explicitly sets them.

Now, return to Workflow Designer and open your HD workflow again. Right-click on your Transcode action and select Run On Rules to display the Run On Rules dialog.

Click Check Services to verify that the *Vantage_HD_Transcoder* now responds correctly to queries about being HD-capable.



Configuring an Action's Fallback Rules

Actions that have been configured to utilize the [Lightspeed Server](#) (for example, by selecting the Lightspeed Accelerated VPL), by default, will use the Legacy Telestream VPL when:

- No services are available to run the Lightspeed Accelerated VPL.
- The queue length of jobs waiting for Lightspeed Servers is larger than a configurable number.

To enable Lightspeed fallback rules, right-click on the action and select Fallback Rules to display the Fallback Rules dialog.

Check the Fallback if Queue Greater than option, and select the maximum number of actions already in queue you will accept, before running this action on a capable service running on a standard Vantage server. The rule will be activated if every capable service has a queue length greater than the number you have selected.

Specifying Automated Retry Settings

Certain actions (typically, those that deal with files or other network-accessible computer systems) which may fail due to file system latency or network delays, can be configured to automatically execute multiple times in an effort to overcome a temporary problem, according to user-specified parameters, called [retry rules](#).

Analyze	Copy	Message
Archive	Delete	Move
Associate	Deploy	Multiscreen Flip
Automate	DPP Validate	IPTV Flip
Chronicle	Examine	Notify
Cloud Flip	Faspex Delivery	Process MMF
Colocate	Flip	QC

Compare	Gather	Report
Compose	Identify	Tempo
Conform	MediaInfo	Timed Text Flip

Retry Rules Overview

Default [retry rules](#) are set for each action *type* by the [Vantage domain](#) administrator. For example, the Vantage domain administrator might specify a default retry rule (in the Vantage [Management Console](#)) so that all [Flip actions](#) retry one time after five minutes.

The default retry rules can be modified for an action in Workflow Designer, and the action retry rules override the default rules. For example, you might specify that a specific [Copy action](#) in a workflow should retry three times: once after five minutes (in case of a SAN blip), once after an hour (in case of Internet congestion), and up to a certain number of times after two days (in case of complete Internet failure).

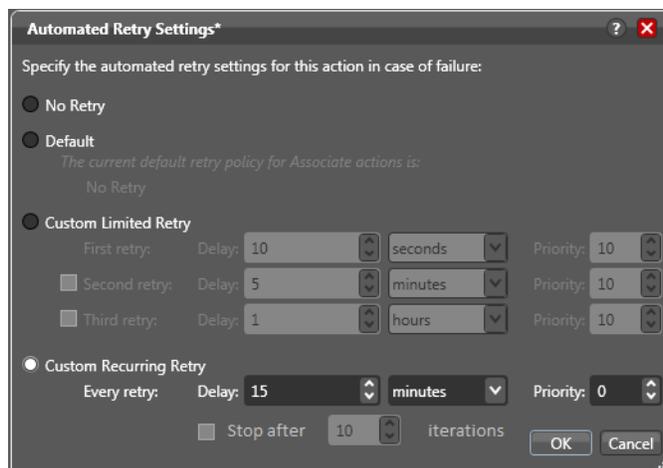
It is important to keep in mind that individual action retry rules specified in Workflow Designer override the default retry rules specified in the Vantage Management Console. If an action does not have override retry rules, the default retry rule for the action type is used instead. If there are no override rules specified for an action, and no default rules for its action type, then a failed action is not retried.

Each time an action is executed, it may be executed according to either task scheduling rules or resource cost settings, depending on what type of load balancing is enabled in the domain, and it may be assigned to a different service for execution.

If you restart a [job](#) that is in the Stopped by User or Failed state, the actions execute as a first-time execution. For example, you have an action with retry after 4 hours. Restarting this job results in immediate execution, because the action is executing on its first try.

Configuration Details

Right-click on an action and select Retry Settings to view or configure retry rules. Workflow Designer displays the Automated Retry Settings dialog.



This dialog supports the following options:

- *No Retry*—Override any default retry settings, and not retry execution on failure.
- *Default*—Utilize the default retry settings specified by the Vantage domain administrator.
- *Custom Limited Retry*—Configure up to three retry settings.
- *Custom Recurring Retry*—Configure the time and priority (which is optional) between retries, and optionally, stop after a certain number of iterations.

Modifying Resource Costs

When you right-click an action, Resource Cost is among the selections. The following topics explain the Resource Cost selections.

- [Cost-Based Load Balancing](#)
- [Task Based Load Balancing](#)
- [Setting Action Resource Cost](#)

Cost-Based Load Balancing

Cost-based load balancing is a legacy load balancing system available with the Advanced Task Scheduling [license](#) and is disabled by default. To determine if cost-based load balancing is enabled, contact your Vantage domain administrator.

Note: When cost-based load balancing is disabled (the legacy, default setting), Vantage uses session-based load balancing and [resource cost](#) settings are ignored. For information on configuring load balancing, see the *Vantage Domain Management Guide*.

When cost-based load balancing is enabled, each action has a default cost and a custom cost. The default cost value is defined by the Vantage domain administrator. The custom cost is defined by the workflow designer in the workflow itself. When you define a custom cost, that cost overrides the default value.

Cost-based load balancing provides a way to control how action processing is distributed among multiple services. During workflow processing, the action cost defines the relative resources that must be available on a Vantage service to process the action. If there are multiple services that can process an action, and if one service does not currently have the resources to process that action, another service with available resources will process the action.

The [resource cost](#) is an integer value that has an ordinal relationship to the other action costs and to a *target resource usage* value defined by the domain administrator. A higher resource cost in an action means that fewer actions can run simultaneously on the same service. A lower resource cost allows more actions to run simultaneously. The actual values you enter for a workflow action must conform to the service settings defined by the Vantage domain administrator. To determine the range of resource cost settings available to you, consult with your Vantage domain administrator.

Task Based Load Balancing

Vantage Task Based load balancing is Vantage's most advanced load balancing capability and augments the existing Vantage Session Based load balancing and the Vantage Cost Based load balancing. Task Based load balancing ensures that all Vantage servers remain fully utilized, maximizing server efficiency and increasing workflow throughput. Task Based load balancing also helps avoid the situation where some Vantage servers are over-utilized and others are under-utilized.

The older cost-based method discussed previously is limited to a single service on a single machine. This method can prevent a service from becoming overloaded, but it cannot effectively balance between different types of actions on a single machine, and it does not offer a global way of managing sessions across multiple machines.

Task based load balancing is a separately licensed option that provides a single set of metrics shared across all services for scheduling tasks and balancing workload on a single machine or all the machines in a domain.

These are the key features of task based load balancing:

- Each metric can be edited and has machine scope (across all services on the machine) or global scope (across all services on all machines).
- Each metric has two inputs: Cost (set for each action) and Capacity (set per machine, or globally). You can edit both on a per-machine basis (for per-machine metrics) or for the entire Vantage Domain (for global metrics).
- A default metric called System Resources is pre-configured to provide a per-machine metric. This metric cannot be deleted and must remain per-machine. However, you may set the capacity for this metric on each machine, and you may remove the metric from an individual action.
- You can create and name your own new metrics.
- By default, each metric has machine scope, but you can edit this after creation.
- The default capacity is 100 "units" for each machine, allowing each cost to indicate the resource percentage an action will use. The capacity can be changed.
- You can choose which metrics are relevant to an action, and you can set the cost for each action.
- When executing a task:

Vantage evaluates all metrics that you attach to the action. If a metric is not attached to an action, it is not considered.

Vantage tracks the aggregate cost of all executing actions on a machine, across all machine-based metrics, and will track the aggregate cost of executing actions across the entire system for global metrics.

Vantage only executes an action when the aggregate cost of executing current actions, plus the new task, does not exceed the capacity of any of the metrics attached to the task.

Vantage will never execute a task when the aggregate cost of executing actions, including the new task, would exceed the capacity of any metrics attached to the task.

- When tasks are queued, they may be preempted only by higher priority actions:
Certain high priority tasks will pause low priority tasks (executing on the same service on the same machine) to free up sufficient resources across all metrics, to allow that high priority task to execute. If doing so would exceed the maximum number of paused jobs specified by the user, then the high priority task will wait until a different set of tasks are present which may be paused. Pauses will not occur across multiple machines; they occur only for actions hosted by the same service.

The new task based load balancing capability allows you to define custom task scheduling rules which allow jobs to be controlled/allocated based on criteria on a given machine or across an entire domain.

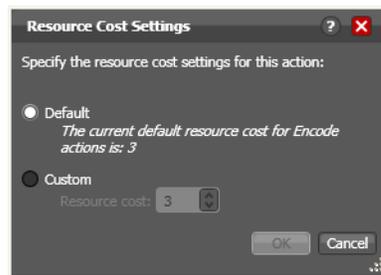
Vantage task based load balancing is enabled via the settings panel in the Vantage Management Console. As with other system level settings, when task based load balancing is enabled (or changed), services must be restarted.

Task based load balancing includes capabilities that replace and extend the Cost based load balancing mode. The new capabilities replace the existing action cost mechanisms, and are used in-conjunction with the existing service capacity to provide more granularity on when and where an action may run.

Setting Action Resource Cost

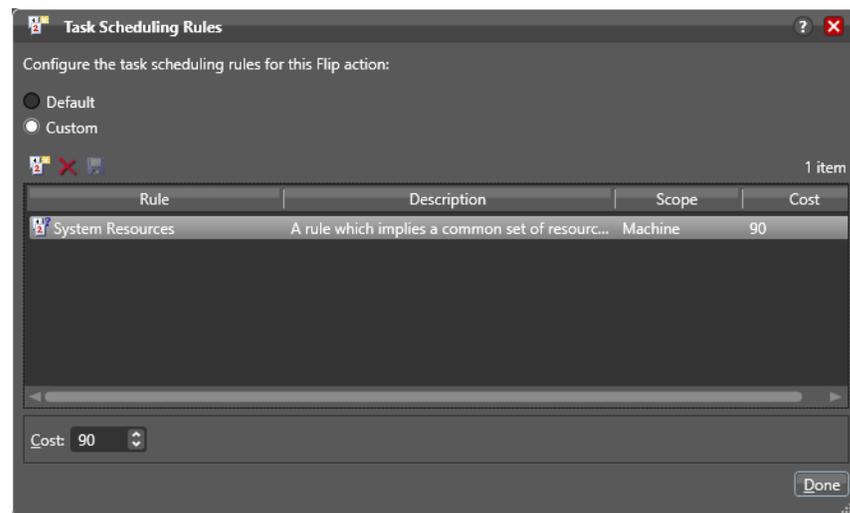
The preceding topics about Cost-Based and Task-Based load balancing provide the background you need to make action Resource Cost decisions, as this topic explains.

1. Right-click the action and select Resource Cost.
2. Select either Resource Cost Settings or Configure Task Scheduling.
 - a. If you select Resource Cost Settings, Workflow Designer displays the Resource Cost Settings dialog, shown here. Select Default to use the default resource cost. Select Custom to set your own resource cost.



- b. If you select Configure Task Scheduling, the Task Scheduling Rules dialog opens. Select Default to apply existing system rules, or select Custom and choose the custom rules you've created that you wish to apply. Also specify a cost and click Done.

For details about creating Task-Based rules using the Vantage Management Console, refer to the *Vantage Domain Management Guide*, "Managing the Vantage Domain" chapter.

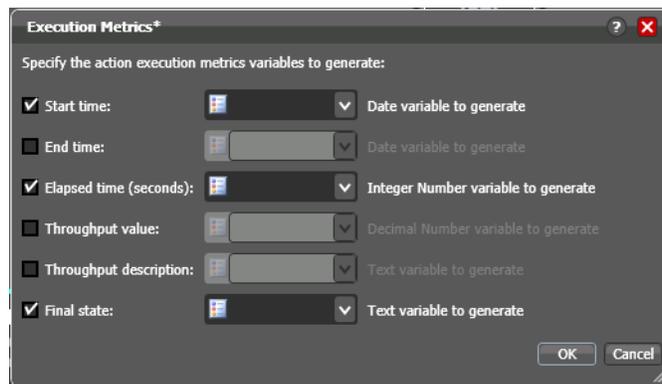


3. Click OK to save.

Generating Execution Metrics

For most actions, you can collect execution metrics, and assign them to variables for processing downstream. For example, you can generate start and end times, total elapsed time, and final [action state](#), among other values. You can use these metrics to enhance your ability to fine tune your system, and improve throughput, or identify bottlenecks.

To generate execution metrics for a given task, right-click the task and select Execution Metrics. Vantage displays the Execution Metrics dialog.



Check the metrics you want to collect, and assign each one to a variable. Then, downstream you can access these variables for analysis.

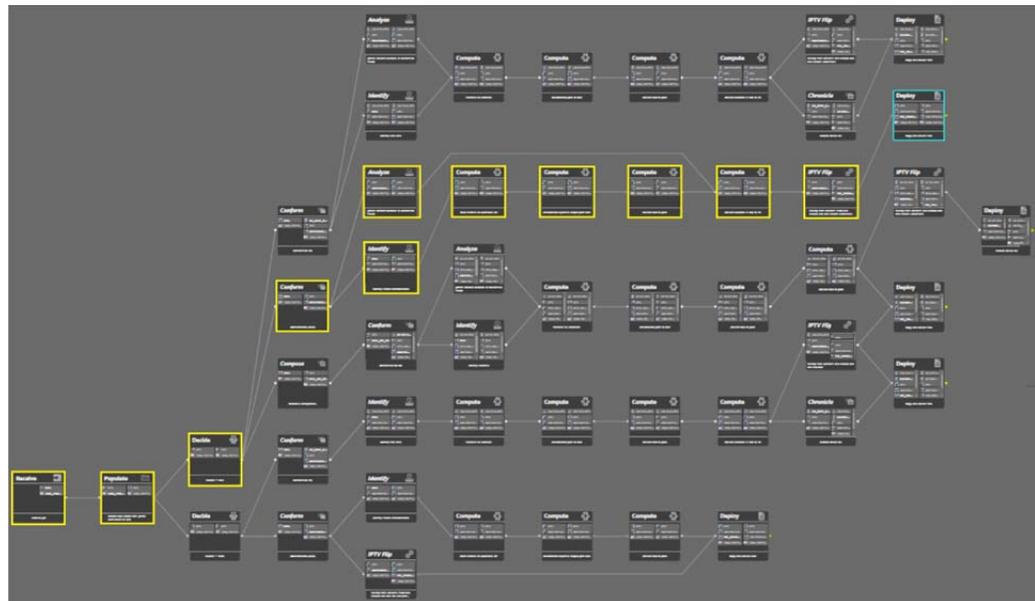
Changing Action Descriptions

You can change an action description by directly clicking on the description text field at the bottom of the action, or right-click and select Description. Enter the new text and then click away.

Highlighting a Branch in a Workflow

In a complex workflow, it might be difficult to determine at a glance exactly which actions are in a specific branch of the workflow. To see all of the actions which will execute on a given branch clearly, right-click on the farthest downstream action that

you want to see in the context of its branch and action execution path, and select Highlight Path.



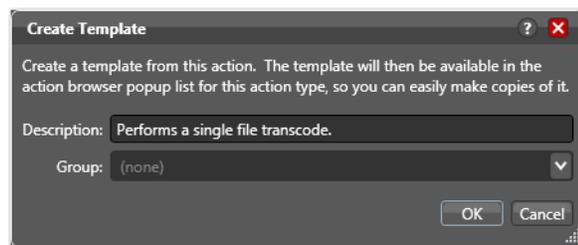
All of the actions in this branch that precede the target action are temporarily highlighted in yellow so that you can identify them.

Creating Action Templates

Vantage provides many actions with a variety of action templates, which you can use (along with your own) to make workflow construction easier.

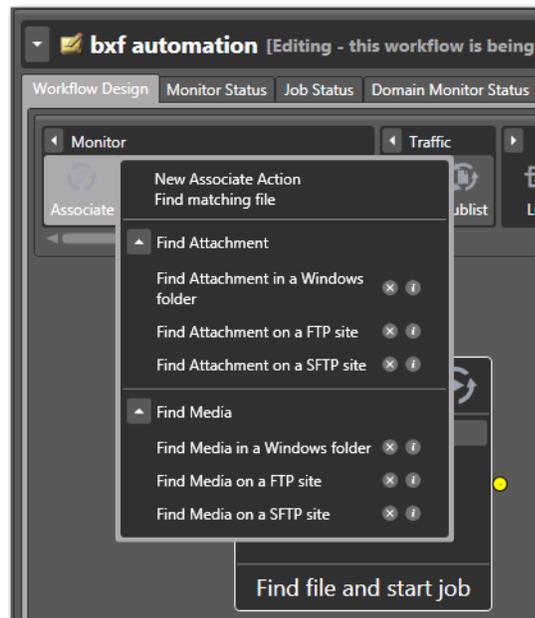
To make your own action template, follow these steps.

1. Add an action to a workflow.
2. Configure it as appropriate.
3. Edit the description (at the bottom of the action), which is used to name the action template.
4. Right-click and select Create Template to save the selected [action](#) as a template.



5. Enter a description (this is optional).
6. Add or select a group, or select None and click OK.

Grouping allows you to organize your action templates. If you want more than one level of grouping, separate each group with a vertical bar (|)—for example, *Broadcast Servers | Grass Valley*. The description of the action displays as the name of the action template.



The action template is added to the template list, and can be selected by clicking on the action.

Exporting a Flip Action

When you are creating a custom Vantage application using the Vantage SDK, you can create and configure a [Flip action](#) and then export it as an XML file, for use as a template in your application.

To export a Flip action, first create and configure the action to meet your requirements. Next, right-click the Flip action and select Export. Workflow Designer displays a File Save dialog, where you can navigate and save the XML file with a name you choose.

You can use this XML file (which contains a definition of your Flip action) in your Vantage SDK-based application. You can also edit the XML file separately from Workflow Designer, of course.

Note: Only Flip actions can be exported using this feature.

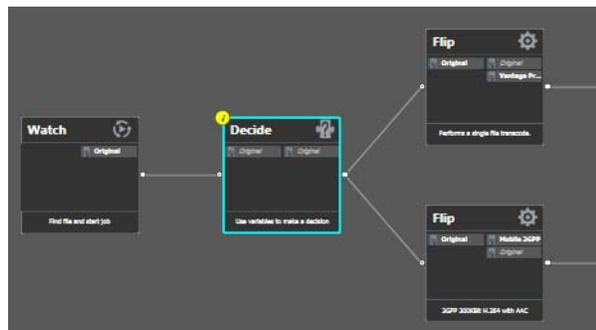
Implementing Processing Logic in Workflows

Many workflows consist of several actions connected in a single line—thus, each action is executed, in turn, for the entire workflow.

However, you may want to create branching workflows that are intelligent and flexible, so that they can process media files with differing processing or output requirements automatically. These workflows can collect information about the media or the file itself at runtime (using the Analyze action, for example), and store that information in variables. Then, you can add a [Decide action](#) to examine the values in the variable or variables, and pass control to one branch or the other, based on the value. (You can also use the Compute action to perform string processing and math operations on the metadata.)

Generally, controlling the flow of media through a workflow is achieved by three things: adding variables and assigning them values, using a [Decide action](#) to evaluate variables, then setting an [action state](#) for each branch that follows the Decide action, so that only the appropriate branch executes for each [job](#).

Branching workflows are scalable; you can add as many decide actions and branches as you need, to further refine your processing choices.



In this example, some metrics about the input file are being examined by the Watch action—file modification date, for example. The Decide action determines if the date is prior to or later than a given date, and sets Success or Fail, based on the answer.

The top branch's [Flip action](#) only executes on Success (processing those files whose modification date is prior to the test date), and the lower branch's Flip action only executes on Fail (processing those files whose modification date is later than the test date).

Managing Vantage Folders

Vantage folders are aliases (or alternate names) for actual file system directories or folders. You can create (and name) Vantage folders to identify specific paths you use frequently. Vantage folders simplify directory referencing by allowing you to specify a short, descriptive folder name instead of a long, complex file path. Vantage folders also allow you to update a path or credentials once, and automatically update all actions using that Vantage folder.

For example, you might have a folder on a given server for HD MPEG2 content: `\\voyager\SunupCampaign\Darwin\WaitingApproval\HDMPEG2`. You can create a Vantage folder in the Vantage folder address book for this path, and name it *SunupHDWaitingApproval*. If you need to change the path or any password associated with the address later, you can simply change it in the address book and all actions will automatically update.

Telestream recommends using UNC paths instead of drive letter paths, and it is required in Vantage arrays. For a detailed discussion, see [Paths for Vantage Storage Overview](#).

Now when you create a workflow that generates media you want saved in this folder path, you simply select *SunupHDWaitingApproval* in the Flip action's inspector.

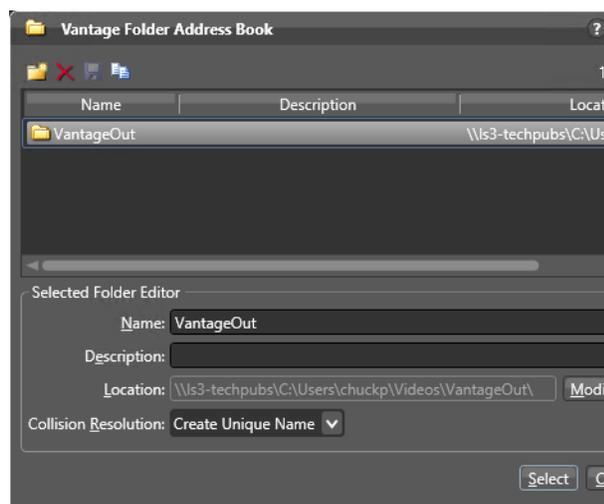
You can create Vantage folders in both the Vantage [Management Console](#) and in Workflow Designer.

To create and manage Vantage folders in Workflow Designer, do the following:

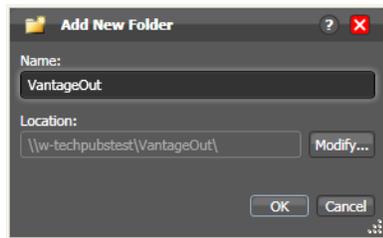
1. Click on the browse  button to the right of any location field that accepts Vantage folders.

For example, open a Flip action and open the Output Location panel to see a Browse button to the right of the Vantage Store/Folder field.

Vantage displays the Vantage Folder Address Book, shown here:



2. Click the Add Folder toolbar button (the new folder button at far left).



3. *Name*—Enter the Vantage folder name.
4. *Location*—Click Modify to display the Folder Location Editor.
5. Select a file system and click Next.
6. Click Browse to navigate and select the directory that this [Vantage folder address](#) should reference. Or, enter the fully-qualified path manually, preferably in UNC form (be sure to only use drive letters when the domain is a single machine.). When manually entering a fully-qualified path, the text displays in red if it does not conform to the proper convention for the supported file system. For a detailed discussion, see [Paths for Vantage Storage Overview](#).
7. Click Finish to close the Folder Location Editor dialog. (You may have to click OK on the local folder warning dialog.)
8. Click OK to add this new Vantage folder address to the domain and close the Add New Folder dialog.
9. *Collision Resolution*—Select Create Unique Name | Overwrite | Set Failure State to specify what Workflow Designer should do when a file of the same name already exists in this location.
 - *Create Unique Name*—Workflow Designer adds a suffix to the filename, making it unique, then saves the file in the location.
 - *OverWrite*—Workflow Designer deletes the current file and saves the new file in the location.
 - *Set Failure State* —Workflow Designer does not save the file; it sets the [action state](#) to Fail so that downstream actions may detect the error and perform a specified task under this condition.
10. Click Select to close the dialog and use the currently-selected folder address, then press OK to save changes. Click Close to simply close the Vantage Folder Address Book dialog with changes.

Troubleshooting Workflow Designer

When opening Workflow Designer for the first time, depending on the design of your network and the location of your workstation and Vantage database server, the Domain login dialog may not display the domain. If this is the case, you can log in by using the name or IP address of the server.

Vantage Actions

This chapter describes each of the [action](#) groups and their actions. Workflow Designer groups actions according to the service that executes them, with one exception. The actions in the Common group can be executed by all Vantage services.

Some actions require a specific license, and are noted appropriately.

Note: For detailed, implementation-oriented help, open the [Inspector](#) on any action and click the  icon to display its man page.

- [Agility Actions](#)
- [Analysis Actions](#)
- [Aspera Faspex Delivery Action](#)
- [AudioTools Action](#)
- [Aurora Action](#)
- [Baton Action](#)
- [Capture Action](#)
- [Catalog Actions](#)
- [Cerify Action](#)
- [Cloud Flip Action](#)
- [Common Actions](#)
- [Communicate Actions](#)
- [Edit \(Post Producer\) Actions](#)
- [FileCatalyst Action](#)
- [IPTV Flip Action](#)
- [MediaMate Action](#)
- [Metadata Actions](#)
- [Monitor Actions](#)
- [Multiscreen Actions](#)
- [Nexidia Action](#)

- [Pulsar Action](#)
- [Signiant Delivery Action](#)
- [Staging Actions](#)
- [Timed Text Flip Action](#)
- [Traffic Actions](#)
- [Flip Action](#)
- [Transport Actions](#)
- [VidChecker Action](#)

Agility Actions

Use Agility actions in workflows where you have an Agility ECS system and you want to submit [jobs](#) to it for processing. You can use Agility actions to create workflows, submit and monitor jobs, process MMF files, and control jobs during execution in Agility.

Note: Before you can use Agility actions, the Agility ECS must be identified in the [Management Console](#): Settings & Options > Agility ECS, and you must have an Agility ECS Connector [license](#) installed.

Agility actions are executed by the [Agility Service](#):

- [Job Profile Action](#)
- [Job XML Action](#)
- [Process MMF Action](#)

Job Profile Action

Use the Agility Job Profile action to obtain and display a list of Agility profiles from an Agility ECS (which must be configured in the Vantage Management Console and available at design time), from which you can select and configure, to submit [jobs](#).

Job XML Action

Use the Job XML action to submit the [job](#) described in the specified XML to the Agility system for processing. This is an alternative to Vantage-based configuration using the Job Profile action, and is intended for use primarily by Agility users with SDK implementations to generate XML-based job profiles for Agility execution.

Process MMF Action

Use the Process MMF action to process an attached MMF file in Agility, and generate variables from it.

Analysis Actions

Use these actions (executed by the [Analysis Service](#) on behalf of the Telestream Transcode & Analysis Engine) in workflows when you want to perform measurements on media files, compare media files, or identify the characteristics of media files, and publish the results as variables or metadata labels, or set the state of the workflow based on the results.

You can publish analysis results in a metadata label within the [binder](#), or you can publish results as variables so that they can be used for decision-making, or to supply values to settings in other actions. In some cases, you can also set the [action state](#) of the [action](#) based on the results of the measurement.

- [Analyze Action](#)
- [Compare Action](#)
- [DPP Validate Action](#)
- [Examine Action](#)
- [Identify Action](#)
- [MedialInfo Action](#)
- [QC Action](#)
- [Report Action](#)

Analyze Action

Use the Analyze action to perform analysis on media using a variety of analysis tools, and variables for use downstream, with the result of the analysis.

Compare Action

Use the Compare action to examine two media files and determine their differences.

DPP Validate Action

The DPP Validate action is part of the optional DPP license. You can use the DPP Validate action to confirm compliance of a DPP metadata XML file. If the XML file passes validation, TRUE is generated; otherwise FALSE is generated. You can test the results of the action downstream to change the workflow's actions based on the validation results. Optionally, you can also generate a report.

Examine Action

Use the Examine action to analyze the video and audio of a media file, by selecting a given analyzer (black detection, macroblocking analysis, slate detection, etc.).

Identify Action

Use the Identify action to examine and identify certain media characteristics, or extract the properties of a media or [attachment](#) file (for example, file name, extension, size, or path) or to generate an MD5 hash of a media or attachment file, which you can use to compare two files downstream, or in other workflows.

You can also extract metadata (such as Author or Title) from media files.

In addition, you can extract a comprehensive set of properties from media files (for example, frame size, frame rate, codec, bitrate, number of audio channels, etc.).

Extracted values are assigned to variables (which you create in Vantage Management Console or directly in Workflow Designer), for use later in a workflow. You can also set the workflow state as a result of execution conditions.

MedialInfo Action

Use the MedialInfo action to perform 2 tasks, based on its analysis of the media file and its streams: Create variables from properties via the MedialInfo API, and create a report of the properties and their values.

In each category, you can produce variables of selected metrics with the results the analysis.

QC Action

Use the QC action to perform analysis on media using a variety of analysis tools. The QC action is similar to the [Analyze action](#), with additional features in addition to generating variables for each property.

In each tool, you can test various properties for True/False, min/max values, allowable values, or ranges, and then set pass/fail and other variables based on the results of the analysis. You can use these variables in downstream actions.

Option, you can also produce a report on the analysis.

Report Action

Use the Report action to generate a report file which contains a list of variables and their values.

Aspera Faspex Delivery Action

Aspera servers and applications enable secure, high-speed batch file transfers of various file types, including media and metadata files. The Aspera action is an optional, [licensed](#) feature in Vantage; it is used to deliver media or other files to Aspera systems.

The Faspex Delivery action is used to deliver media or other files to Aspera Faspex drop boxes and users.

AudioTools Action

The AudioTools action is an optional, [licensed](#) feature in Vantage. It uses the AudioTools Service to enable Vantage workflows to utilize and interact with various AudioTools products from Minnetonka Audio Software. The AudioTools Custom Workflow executes a selected, pre-defined AudioTools Server workflow. AudioTools Loudness Control executes the typical loudness processes, including hitting multiple target parameters using an iterative processing pass.

Aurora Action

The Aurora action is an optional, licensed feature in Vantage. It uses the [Aurora Service](#) to utilize and interact with various QC tests provided by the Digimetrics Aurora software. The tests provide the ability to determine whether a particular input media (specified by [nickname](#)) either passes or fails a particular QC check. Each test also generates a report file that may be utilized during later stages of the workflow.

Baton Action

The Baton action is an optional, [licensed](#) feature in Vantage. It uses the [Baton Service](#) to enable Vantage workflows to utilize and interact with various QC tests provided by the Baton software. The tests provide the ability to determine whether a particular input media (specified by [nickname](#)) either passes or fails a particular QC check. Each test also generates a report file that may be utilized during later stages of the workflow.

Capture Action

The Capture action is an *origin action*; Capture actions are executed by the Vantage Live Service on a Lightspeed Live Server equipped with the Live Capture option. Capture actions support Open Workflows on the outbound side and are used to capture Lightspeed Live Capture server's live SDI input or an IP media stream delivered over Ethernet, and output captured media files to Live Storage using the specified output container and encoder.

The Capture action may be included in workflows created in Vantage domains with the Live Capture option installed on a Lightspeed Live Capture server. The Capture action inspector allows you to select and configure live streams for processing, filtering, transcoding, and output. See the Lightspeed Live Server Guide for more details.

Catalog Actions

Catalog actions enable you to query a Vantage catalog to determine if a [binder](#) exists, and also to register a binder in a catalog. These actions are executed by the [Catalog Service](#).

- [Remove Action](#)
- [Exist Action](#)
- [Register Action](#)

Remove Action

A Remove action is executed by the Catalog Service, and is used to permanently remove a binder from the catalog and set the associated file resources to expired. If the action succeeds, it emits an action state of Success; otherwise, Failure.

This action is open workflow capable if the Open Workflows license is installed.

Exist Action

Use the Exist action to determine if a [binder](#) of the same name already exists, thus indicating that a [job](#) has already run on the same media file.

This action is open workflow capable if the Open Workflows license is installed.

Register Action

The Register action adds the workflow [binder](#) generated by each [job](#) to a specified Vantage catalog. This allows Vantage to preserve the binder—and all files it references—even after a job expires (which deletes the associated binder by default). This is also how binders become accessible to operators in Workflow Portal. For details about Workflow Portal, see [Using Workflow Portal](#).

This action is open workflow capable if the Open Workflows license is installed.

Cerify Action

The Cerify action is an optional, licensed feature in Vantage. The Cerify action enables Vantage to interact with the Tektronix Cerify suite of QC components.

Cloud Flip Action

The Cloud Flip action is used to submit media to the Telestream Cloud platform from Vantage workflows via the Telestream Cloud API to a particular profile that a user specifies. The Cloud Flip action is executed by the Telestream Cloud service. As part of the submission, the specified input file is uploaded and then processed according to the rules associated with the specified Telestream Cloud profile.

Common Actions

Common actions are typically light-weight, short duration, utilitarian actions, and do not have a dedicated Vantage service to execute them. Instead, these actions are implemented in every Vantage service, so that any service available can execute them efficiently and instantaneously.

- [Compute Action](#)
- [Construct Action](#)
- [Decide Action](#)
- [Forward Action](#)
- [Receive Action](#)
- [Synchronize Action](#)

Compute Action

A Compute action uses variables to set other variables. For example, you can use Compute to add two numbers and assign the result to the selected variable. Compute can perform mathematical operations such as addition, subtraction, division and multiplication. It can also convert variables between types (such as converting a time code to a string), string manipulation, such as appending strings together into an output variable, and comparison functions.

This action is open workflow capable if the Open Workflows license is installed.

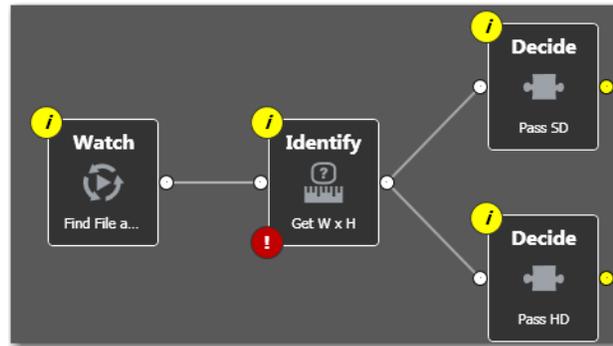
Construct Action

A Construct action enables you to construct complex strings, paths, and math expressions from literals, variables, and tokens, for use in downstream actions.

This action is open workflow capable if the Open Workflows license is installed.

Decide Action

A Decide action sets the [action state](#) based upon variables. It is commonly used to determine whether or not a branch in a workflow should execute (it sets the Success state) or not (it sets the Ignore state).



For example, if one branch is for HD, it will start with a Decide action that will set the state to Success for HD content, ignore otherwise; if another branch is for everything else, it will start with a Decide action that performs the opposite behavior.

Forward Action

A Forward action starts a new [job](#) for the target workflow, delivering a [binder](#) and all current variables from the originating. A Forward action can only be added to the end of a workflow, and requires that the target workflow has a [Receive action](#) as its first action.

The Forward action is the only terminating action in Vantage—it does not have a connecting pin on the right side. Thus, once you add a Forward action to a workflow (or branch in a workflow), you cannot add any more actions, because control has passed to another workflow with a Receive action as its [origin action](#).

Typically, workflows are created with a Receive action when they are intended for execution by another workflow that immediately precedes this one. This ability to chain workflows enables you to create run-time customizable workflows consisting of smaller workflow building blocks.

Receive Action

The Receive action is similar to a Watch action in that it starts jobs. Unlike a Watch action, it allows you to ingest a file from an external source and submit it for processing.

Methods you can use to submit jobs to a Receive-based workflow:

- Another workflow
- A Vantage SDK-based program
- Workflow Portal

- Drag and drop a file on it.

The ability to chain workflows enables you to create run-time, customizable workflows consisting of smaller workflow building blocks. When you chain workflows, you can also pass [binders](#) and variables between them.

Note: An origin action is required as the first action in a workflow, even if you plan to only manually submit [jobs](#) to this workflow.

Synchronize Action

The Synchronize action is used in workflows where multiple actions connect to multiple subsequent actions. Synchronize provides a common connection point, where all upstream actions need to be connected to all downstream actions.

Communicate Actions

Communicate actions are used to communicate with external systems. They are executed by the [Communicate Service](#).

- [Automate Action](#)
- [Message Action](#)
- [Notify Action](#)

Automate Action

The *Automate action*, which is executed by the [Communicate Service](#), is similar to the Notify action. It contains system-integration extensions which are relevant to TrafficManager workflows, enabling you to save job or other metadata to a file and interface/integrate with external automation systems. This capability ranges from writing XML-based material to a file system to direct integration with specific automation systems.

In TrafficManager applications, this action is useful to notify automation systems that a commercial has been processed and is available for air. For example, a Notify action can create text or CSV dublists and provide them to automation systems that are capable of processing dublists in that format.

Each extension has specific features which are detailed in the manual page for the extension.

Message Action

A Message action enables you to generate and transmit an electronic message—an email, for example. You must configure Vantage to use an SMTP server before email can be utilized; this can be done in the Vantage Management Console.

This action is open workflow capable if the Open Workflows license is installed.

Notify Action

A Notify action transfers [job](#) information to external systems via Web Services or other methods to transfer data. The job information may also be transferred via an XML file or files of other formats. You can also use the Notify action to invoke a command shell.

This action is open workflow capable if the Open Workflows license is installed.

The Notify action is extensible, and can communicate with a wide variety of systems and generate various files, including:

- Automation Files
- BXF Files
- Dolby DP600
- Dump XML Files
- External Command Shell
- HTTP server
- Avid Interplay
- Avid MOBID Generator
- Civolution NexGuard
- SeaChange MVL
- Text/CSV Files
- General Purpose Web Services Notification

The TrafficManager-centric extensions are implemented in the [Automate Action](#), but are also available in the Notify action for backward-compatibility.

Edit (Post Producer) Actions

Edit actions are components of Vantage [Post Producer](#), an optional, [licensed](#) feature. These actions are executed by the Edit Service, and may run on a Vantage [Lightspeed Server](#) or a standard Vantage server.

- [Chronicle Action](#)
- [Colocate Action](#)
- [Compose Action](#)
- [Conform Action](#)
- [Tempo Action](#)

Chronicle Action

The Chronicle action converts a post-rendered Composition XML file into formats for use in other systems—ad-insertion systems, for example.

Colocate Action

The Colocate action converts a Composition XML file with non-file-based URLs (for example, Amazon S3) and localizes the media and produces a modified CML file with the URLs converted to the localized file paths.

This action is open workflow capable if the Open Workflows license is installed.

Compose Action

The Compose action converts various media descriptor file formats: Anystream AN2, Final Cut Interchange XML, Simplified Avid AAF, QuickTime Reference, Adobe FC7XML, and Telestream TSEDL) into a Composition XML file so that it can be used by the Conform action to compose media.

This action is open workflow capable if the Open Workflows license is installed.

Conform Action

The Conform action assembles and optionally transcodes multiple video and still image files into a single output file, applying filters as specified by you. The input files and related instructions for the output file are all defined in a Composition XML file.

This action is open workflow capable if the Open Workflows license is installed.

Tempo Action

The Tempo action is part of the Edit group. All actions in the Edit group are executed by the Edit service. The Tempo action is included in Tempo, a time-adjusting encoding solution built on the Vantage platform. The Tempo action uses the Edit Service for re-

timing file-based content and intelligently decreasing or increasing the running time of shows and segments.

This action is open workflow capable if the Open Workflows license is installed.

emotion Action

The emotion action is an optional, licensed feature in Vantage. The emotion action enables Vantage to utilize and interact with Emotion Systems Emotion Engine audio software.

FileCatalyst Action

The FileCatalyst action is an optional, [licensed](#) feature, which enables Vantage workflows to access and deliver files to FileCatalyst servers via integrated FileCatalyst client software.

IPTV Flip Action

The IPTV Flip action (in the IPTV VOD category) is included with the Cable / IPTV version of TrafficManager. IPTV transcoding is designed for generating MPEG2 Transport Stream files and meeting multiplexing requirements. The IPTV Flip action is executed by the IPTV VOD Service, which can optionally run on a [Lightspeed Server](#) for GPU-accelerated x264/x265 encoding and video processing.

The IPTV Flip action and IPTV VOD Service supports the features required to handle varying IPTV, set-top box and cable encoding requirements, and ancillary metadata specific to cable ad splicing and cable/IPTV set-top box environments. Transcoding is performed by the Telestream Media Transcode and Analysis Engine on behalf of Vantage.

This action is open workflow capable if the Open Workflows license is installed.

MediaMate Action

The MediaMate action enables you to implement screen subtitling. This is an optional, [licensed](#) feature. The MediaMate action is used to provide screen subtitling, by utilizing various subtitling systems from Screen.

Note: The MediaMate action is only supported on the 64-bit version of Windows Server 2008.

Metadata Actions

Metadata actions are an optional, [licensed](#) feature available in certain Vantage editions. They are used to perform conversions between [attachment](#) files, metadata labels, and variables. These actions are executed by the Metadata Service.

- [Populate Action](#)
- [Transform Action](#)

Populate Action

Populate actions transform data between variables, [attachment](#) files, and metadata labels. During ingest, metadata labels can be added to ingested media and generally include trim information, audio levels, file properties, and commercial metadata. The metadata labels can then be reviewed and modified by operators using Workflow Portal. At any stage of a workflow, Vantage can extract information from labels using the Populate action, allowing Vantage to, for example, trim clips during a transcode or use audio level limits to dampen audio when creating a broadcast asset.

This action is open workflow capable if the Open Workflows license is installed.

Transform Action

A Transform action transforms data between XML files (ingested into the job as [attachment](#) files) and labels. XSL style sheets are used to perform these transformations.

This action is open workflow capable if the Open Workflows license is installed.

Note: The Transform action is available in Metadata and Transcode Connect [licenses](#). You can only use style sheets that have been imported into the [database](#); you cannot reference XSL files directly. The Vantage administrator manages your XSL style sheets using the Vantage Management Console (Vantage Domain > Workflow Design Items > Style Sheets).

Monitor Actions

Monitor actions are used to identify and ingest files to be processed by a workflow, and in the case of the Watch action, start [jobs](#) for this workflow. They are executed by the Monitor Service.

- [Associate Action](#)
- [Camera Ingest Action](#)
- [Watch Action](#)
- [Workorder Action](#)

Associate Action

An Associate action uses the Monitor Service to poll a target location (a directory, for example) on a device or file system (FTP, network folder, etc.) to discover new files in the context of a job.

Often, an Associate action follows a Watch action, and utilizes the file name of an existing media file or [attachment](#) as the basis for discovering new files; for example, if media file *Vantage.mpg* is currently in the workflow, then the Associate action may look for *Vantage.scc*. The Watch action can publish the file name as a variable, and pass it to the Associate action to pick the corresponding file (the file extension must be dropped to accomplish this). The required file match pattern can be configured in the Associate action's [Inspector](#) dialog.

When Associate actions are executing, subsequent actions must wait until a file is found or a time-out occurs. When a new file is discovered, the Associate action ingests the file, assigns a [nickname](#), and makes the file available to other actions in the workflow.

Note: An origin action is required as the first action in a workflow, even if you plan to manually submit [jobs](#) to this workflow—Associate is not an origin action.

Camera Ingest Action

A Camera Ingest action is an [origin action](#); it uses the Monitor Service to regularly poll a target location (a directory, for example) on a card reader device or Windows file system to discover new camera files of supported formats, including reference files. You can also manually submit jobs to workflows beginning with a Camera Ingest action.

Note: Each Camera Ingest action is configured to detect a specific camera file format. If the target contains both P2 AVC-Intra and XDCAM EX files, two Camera Ingest actions are required.

When a new file or shot is discovered, the Camera Ingest action submits a job for the workflow which it is part of, for processing.

The Camera Ingest action has features including stitching individual shots (including self-contained, split, and spanned clips), and controlling whether camera content is broken into individual sections, or treated as a single unit.

Watch Action

A Watch action is an [origin action](#), which uses the Monitor Service to continually (and at regular periods) poll a target location (a directory, for example) on a device or file system (FTP, network folder, etc.) to discover new files.

The Watch action submits a [job](#) to the workflow which it is part of, when:

- A new file is discovered in the target folder
- You manually submit a file to the workflow
- You drag and drop a file on the Watch action in the workflow.

Note: An origin action is required as the first action in a workflow, even if you plan to manually submit jobs to this workflow.

This action is open workflow capable if the Open Workflows license is installed.

Workorder Action

A Workorder action is an [origin action](#); it uses the Monitor Service to regularly poll a target Windows directory for new [workorder files](#) to process. The Workorder action provides a simple and highly effective method of submitting multiple, similar jobs without using the SDK.

When a new file is discovered, the Workorder action submits one job for each row in the file.

Multiscreen Actions

Multiscreen actions are used to produce high-quality, adaptive-bitrate (ABR) packages in industry-standard adaptive rate streaming formats. They are executed by the Multiscreen Service.

- [ABR Optimize Action](#)
- [Multiscreen Flip Action](#)

ABR Optimize Action

The ABR Optimize action is designed to produce high-quality, adaptive-bitrate (ABR) packages which significantly reduce delivery bandwidth and distribution costs while ensuring perceived viewing quality. Multiscreen Flip actions are executed by the Multiscreen Service. Based on the SSIMplus quality measurement suite from SSIMWave, service providers and content creators can use the ABR Optimize action to set guaranteed quality levels using a measurement technique that closely tracks actual viewer perception.

Multiscreen Flip Action

The Multiscreen Flip action is an optional, [licensed](#) feature. Multiscreen Flip actions are executed by the Multiscreen Service. The Multiscreen service may run on a Vantage [Lightspeed Server](#) or a standard Vantage server.

This action is open workflow capable if the Open Workflows license is installed.

The Multiscreen Flip action allows you to encode and package decoded digital baseband media into industry-standard adaptive rate streaming formats, including Adobe HDS, Apple HLS, Microsoft HSS, and others. Transcoding is performed by the Telestream Media Transcode and Analysis Engine on behalf of Vantage.

Nexidia Action

The Nexidia action is an optional, licensed feature in Vantage. It uses the Vantage Nexidia Service to interact with Nexidia QC servers running Nexidia QC software. The specified input files are passed to the Nexidia QC software where they are analyzed using the test profile selected.

Pulsar Action

The Pulsar action is an optional, [licensed](#) feature which enables broadcasters to integrate the Pulsar suite of content verification components directly in Vantage workflows.

Signiant Delivery Action

The Signiant Delivery action is an optional, [licensed](#) feature which enables Vantage workflows to deliver files to Signiant-enabled servers. The Signiant Delivery action is executed by the Signiant Service, and uses the Signiant Content Transfer Engine (CTE) feature, which must be licensed on the Signiant server.

Staging Actions

The optional, [licensed](#) Staging Service actions are responsible for file operations in preparation for moving files to other systems/platforms with special packaging requirements. They are executed by the Staging Service:

- [Archive Action](#)
- [Gather Action](#)

Archive Action

Use the Archive action to convert the selected input file to another format, usually in preparation for copying, moving, or deploying a file to a given system that has special file format requirements. The Gather action is only enabled with the optional, licensed Metadata option.

Gather Action

Use the Gather action to collect one or more files from a specified server and directory (and optionally, its sub-folders), and bring them into the workflow as [attachments](#). Use of a file matching pattern allows you to select only certain types of files. The Gather action is only enabled with the optional, licensed Metadata option.

Timed Text Flip Action

Use the Timed Text Flip action to automate caption file-type conversions, extract caption data from media with embedded captions, create subtitle overlay graphics, and manipulate the timecode of caption data to match media.

Traffic Actions

The following actions are executed by the Traffic Service and are a component of TrafficManager, an optional, [licensed](#) feature. Catch and Dublist actions monitor catch servers and dublist servers for new files. These actions are both [origin actions](#). The Syndicate action processes metadata files for syndicated media processing.

- [Catch Action](#)
- [Dublist Action](#)
- [Syndicate Action](#)

Catch Action

Use the Catch action (an [origin action](#)) to select a catch server, and configure the action to monitor it for new commercials and syndicated content arriving from the publisher, expose all relevant metadata, and submit the commercial for processing in TrafficManager workflows. The Catch action is part of TrafficManager; an optional, licensed feature of Vantage.

The Catch action submits a [job](#) to the workflow which it is part of, when:

- A new file is discovered in the target folder.
- You manually submit a file to the workflow.

Note: An origin action is required as the first action in a workflow, even if you plan to manually submit jobs to this workflow.

Dublist Action

Use the Dublist action (an [origin action](#)) to perform dublist processing in TrafficManager workflows. The Dublist action is part of TrafficManager, an optional, licensed feature of Vantage.

In the Dublist action's inspector, you can select a dublist system or server as the target, and configure the action to monitor it for new dublists, which it resolves with the standing dublist.

The Dublist action submits a [job](#) to the workflow which it is part of, when:

- A new file is discovered in the target folder
- You manually submit a file to the workflow

Note: An origin action is required as the first action in a workflow, even if you plan to manually submit jobs to this workflow.

The Dublist action uses the [binder](#) name as the unique identifier for the commercial, so it should be set to the Ad ID.

Syndicate Action

Use the Syndicate action in syndicated media ingest workflows to convert sidecar metadata XML files to a mezzanine format for use in downstream actions in the workflow, or for use in Syndicated Workflow Portal applications. The Syndicate action is part of TrafficManager, an optional, licensed feature of Vantage.

In the Syndicate action inspector, you can specify the type of metadata file being transformed, and configure the action to utilize specific templates for processing.

Flip Action

The Flip action is a broadly-used, general-purpose transcoding action, executed by the Transcode Service (which in turn utilizes the Telestream Transcode & Analysis Engine). Use the Flip action to create media of a new format, and save it as a file, using a prescribed codec profile. How you configure the encoder depends on the encoder you choose.

This action is open workflow capable if the Open Workflows license is installed.

Transport Actions

Transport actions are executed by the Transport Service and perform file operations on specified files.

- [Copy Action](#)
- [Move Action](#)
- [Delete Action](#)
- [Deploy Action](#)

Copy Action

Use the Copy action to duplicate a file from one directory to another directory on a given file system. The new file can be tracked by the workflow—that is, referenced in the [binder](#). As a result, the new file must be given a [nickname](#).

This action is open workflow capable if the Open Workflows license is installed.

Move Action

Use the Move action to remove a file from one directory and place it in another. You can optionally specify a different destination [nickname](#) during the move.

Delete Action

Use the Delete action to delete a file on the specified file system. This action also removes the file reference from the [binder](#).

Deploy Action

The Deploy action copies one or more files to a destination in a single step, and may perform additional custom steps depending upon the type of deployment.

Deployed files are not referenced in the [binder](#), and are not tracked after the action completes.

VidChecker Action

The VidChecker action is an optional, [licensed](#) feature which enables broadcasters to integrate VidChecker, automated QC and intelligent automated correction, directly in Vantage workflows.

Monitoring Workflows and Managing Jobs

The topics in this chapter describe how to submit jobs, monitor workflows, and manage jobs in Workflow Designer.

- [Submitting Jobs to Workflows](#)
- [Checking Workflow Activation Status & History](#)
- [Monitoring and Managing Jobs](#)
- [Generating Job Reports Manually](#)
- [Managing Job Report Configurations](#)
- [Viewing Binders](#)
- [Controlling Action Execution in Jobs](#)
- [Viewing Action Status](#)

Note: In addition to submitting jobs in Workflow Designer, you can also submit jobs by dropping media files into target directories, or by using the Dublist Portal and the Workflow Portal clients. You can also submit jobs from other programs using the Vantage SDK.

Note: You can also monitor and manage jobs using the Job Status Views web application. See [Using the Job Status Views Web Application](#).

Submitting Jobs to Workflows

This topic discusses the various methods used to submit media or other files to Vantage workflows. You can submit jobs in the following ways:

- Directly in Workflow Designer using various methods. See [Manually Submitting Files Directly in Workflow Designer](#), following.
- Automatically, by adding files to directories monitored by active workflows.
- As a batch, by submitting a [workorder file](#) to a Workorder-based workflow. See [Submitting Files as a Batch](#), following in this topic.
- From Workflow Portal and the [Workflow Portal Web Application](#). See [Using Workflow Portal](#).
- From Dublist Portal. See the TrafficManager User Guide.
- From third-part or custom programs using the Vantage SDK.

Manually Submitting Files Directly in Workflow Designer

To submit files manually to a workflow for processing directly in Workflow Designer (which starts a new [job](#) for each file submitted), do one of the following:

- Drag and drop the selected file or files from a Windows Explorer directory directly onto the [origin action](#) of the target workflow. See [Submitting Files via Drag and Drop](#).
- Select the workflow and click the Submit Job button to submit one or more files. See [Submitting Files via the Submit Button](#).

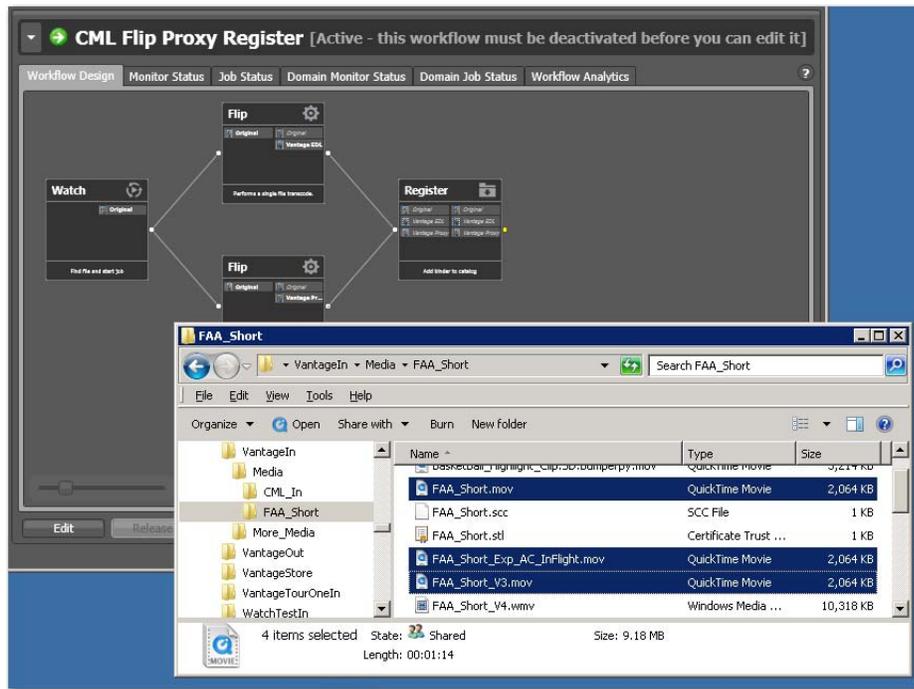
Note: The file you are submitting doesn't have to be a media file; though it usually is. You can manually submit any file that the workflow can process. It might be some form of XML (metadata, for example). Or, it might be a [workorder file](#) for a [Workorder action](#) workflow, for submitting several jobs at once. It might be some other form of file, based on your workflow.

Submitting Files via Drag and Drop

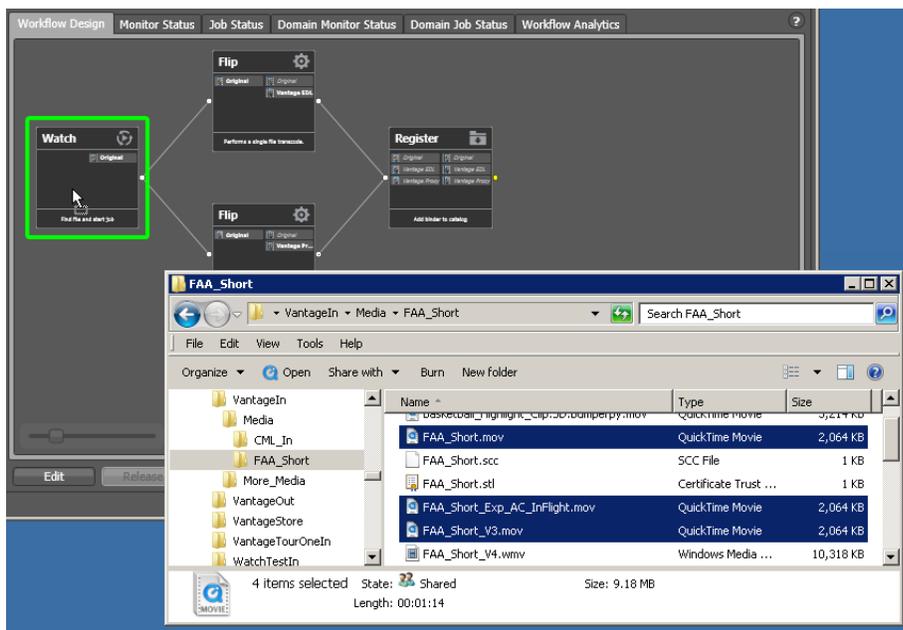
To submit files for processing using drag and drop, follow these steps:

1. In Workflow Designer, select the target (it must be active) workflow and display it in the Workflow Design workspace.
2. In Windows Explorer, navigate to the directory where the file or files that you want to process are stored.

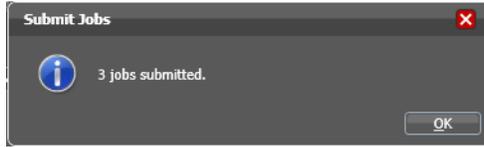
3. Select one or more files and drag them over the **origin action** in the workflow.



4. When the origin action highlights (displays a bright green border), drop them onto the action to submit them for processing.



Vantage displays a confirmation dialog when all jobs have been submitted:



Click OK to dismiss the dialog, and display the Job Status workspace to track your jobs.

Submitting Files via the Submit Button

To submit a file to an activated workflow manually, follow these steps:

1. Select the target (activated) workflow in the Workflows panel.
2. Click the Submit Job button as shown below.

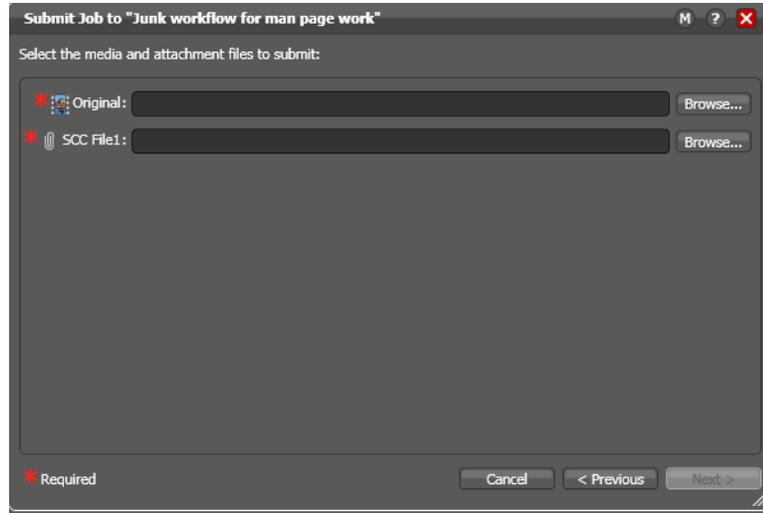


Click the Submit Job button to select media files for processing with the selected workflow.

In a multiple **origin action** workflow, Workflow Designer displays a dialog that lists the origin actions.

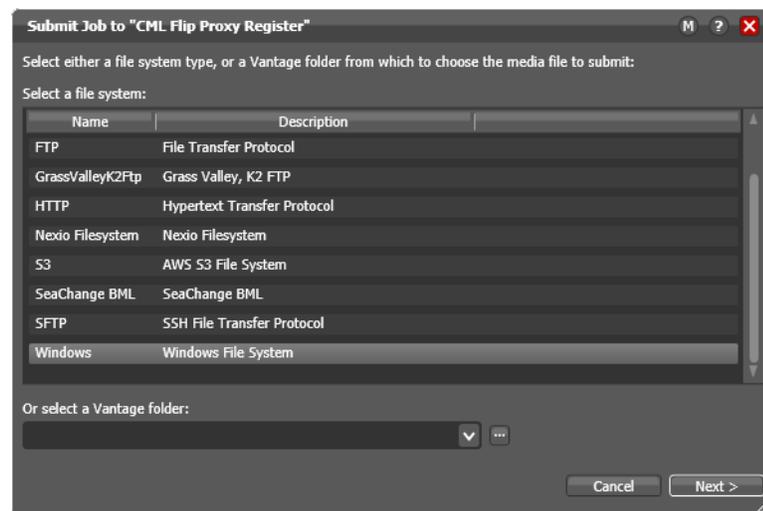
3. Select the action you want to start the job, then click Next to continue.

For a multi-file workflow (for example, a Receive-based workflow that expects more than one file), Workflow Designer displays this Submit Job dialog:



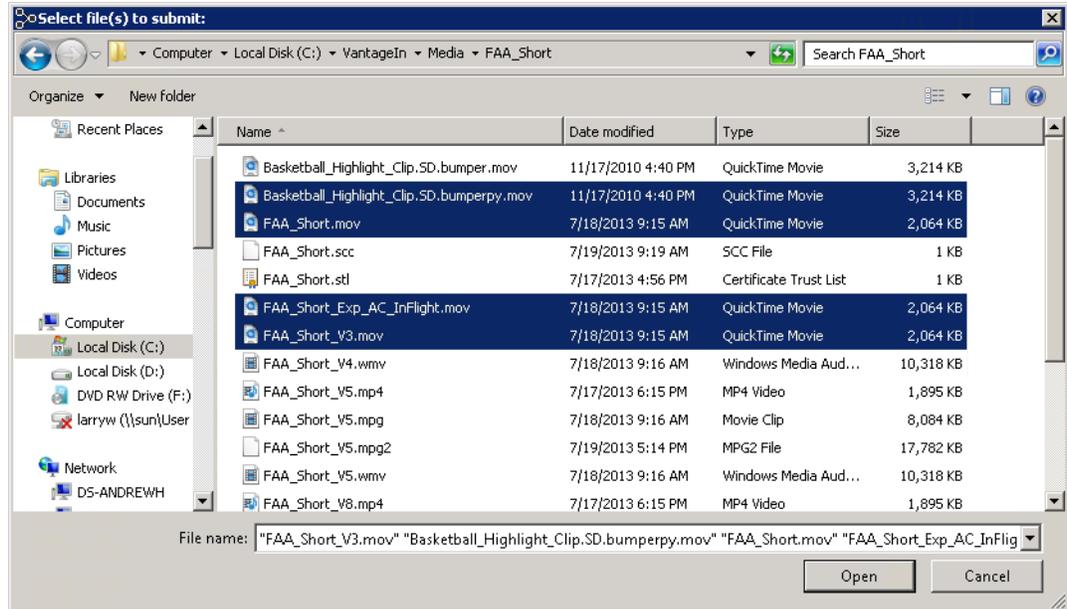
Enter or browse and select the file for each nickname and proceed to [Step 6](#).

For a single-file workflow, Workflow Designer displays the Submit Job dialog:

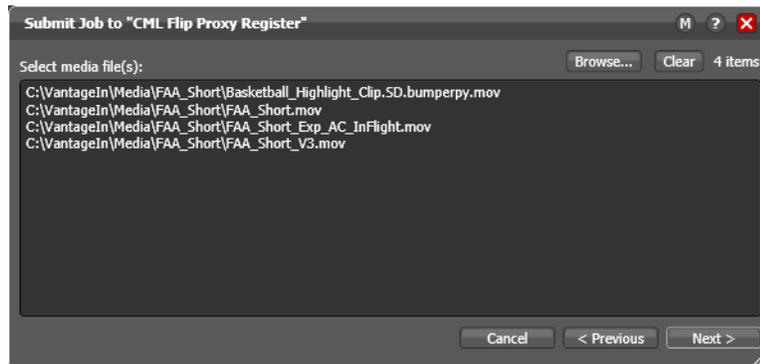


4. Select the type of file system (or a Vantage folder) where the input file or files are stored, and click Next.

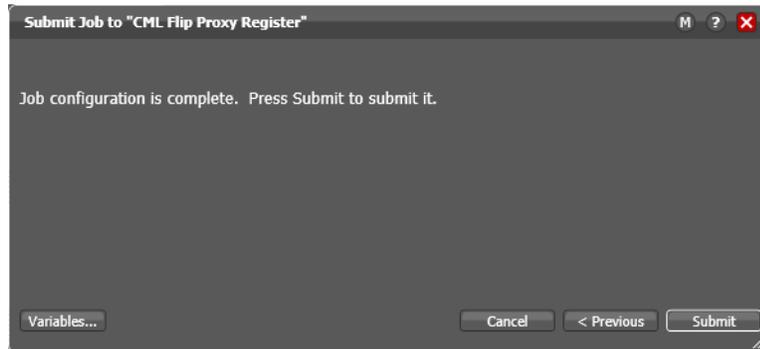
Workflow Designer displays the Windows Explorer window:



5. Navigate to the server and directory, and select one or more directories and/or files for processing and click Open. Click Browse to add more files or click Clear to start over. As you select files, they are added to the list:



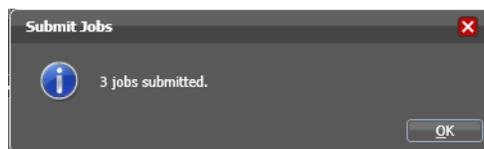
6. When the list is correct and you're ready to submit them, click Next.



7. Optionally, click Variables to manually add variables with values for this job. The variables must be identified in actions. These variables are initialized to the default value of the variable definition in the domain, and the value may be changed by actions in the workflow. For details, see [Adding Variables to an Action](#).

8. Click Submit to submit the file(s) for processing.

Vantage displays a confirmation dialog when all jobs have been submitted:



When you have submitted the job(s), you can view their progress in the Job Status workspace (see [Monitoring and Managing Jobs](#)).

Submitting Files as a Batch

To submit a batch of files to a workflow for processing (which starts a new job for each file entry in the workorder submitted), you use a Workorder action as the origin action in the workflow, and you create workorder files (a CSV file) to identify those files you want processed. Next, you can use any method you like to submit the file for processing to the active workflow.

The Workorder action enables automated submission of multiple jobs in batches. For example, you can use a workorder-based workflow to process multiple media files, without manually adding the files to a target directory—instead, you just submit a workorder file, which contains a job entry for each media file you want to process. The Workorder action initiates one or more jobs each time a new workorder file is discovered (based on the number of job entries in the file) and passes control to the next action in the workflow. Workorder files must conform to the schema specified in the selected workorder scheme. Workorder schemas are created in the Management Console.

Workorder files are a simpler, automated submission alternative to job submission via the Vantage SDK. A Workorder file is a text file containing one or more work orders, or job descriptions. The format of workorder files is CSV-based. Each job description is comprised of a fully-qualified reference to one or more media files, attachments, plus variables—all the input needed for the workflow performing the processing. At least one workorder scheme must be created (either directly in the Workorder action or in the Vantage Management Console) in order to properly identify the workorder schema and submit the jobs in a Workorder action-based workflow.

Jobs may be of any type, including Post Producer jobs, where the job identifies a CML file for processing. (Post Producer jobs require a special license.) While workorder files may be manually created (in an Excel spreadsheet, or a text editor of some kind, for example), ideally a system component responsible for submitting media to Vantage for processing will dynamically and automatically create workorder files and deliver them to the target share for submission and processing.

Checking Workflow Activation Status & History

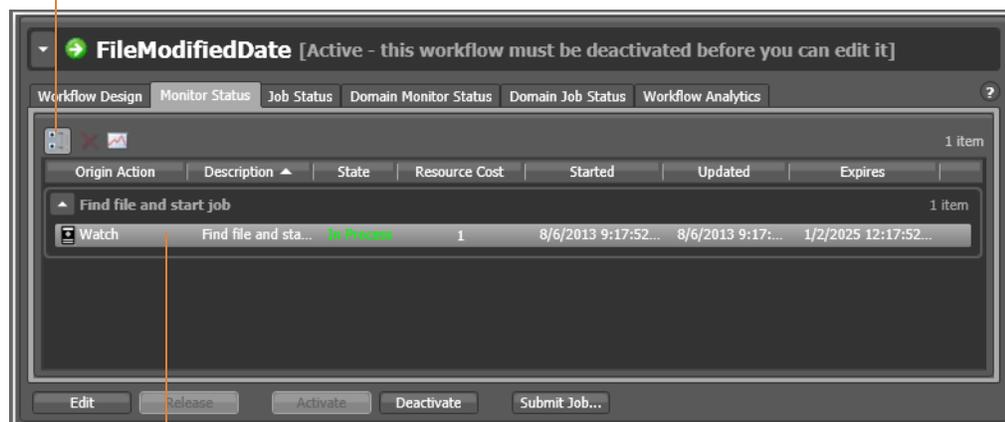
To check on the status and activity history of workflows, use one of these tabs:

- Select a workflow and click the Monitor Status tab (or select File > Monitor Status).
- Click the Domain Monitor Status tab (or select File > Domain Monitor Status).

The Monitor Status workspaces are useful when you're performing operator-related tasks or when you're managing or performing domain-wide production media processing. The only difference between the two tabs is one of scope.

The Monitor Status tab displays all activation records for the selected workflow, indicating the dates and times when the workflow was active. Each time a workflow is activated, a new activation record is added. It displays each [origin action's](#) execution (for example, Watch actions) in the selected workflow, and indicates its current status.

Monitor Status toolbar



Each row is an active origin action, indicating status and other details.

The Domain Monitor Status tab displays all of the workflows currently active in the domain. Because this tab's focus is domain-wide, it also displays two additional columns of information not found in the Monitor Status tab: Workflow and Category.

Static information in the activation record includes the [origin action](#), [resource cost](#), and several date/time stamps, including when the [action](#) will expire. The state is real time information, indicating the state of the action: In Process (currently executing), Completed, etc.

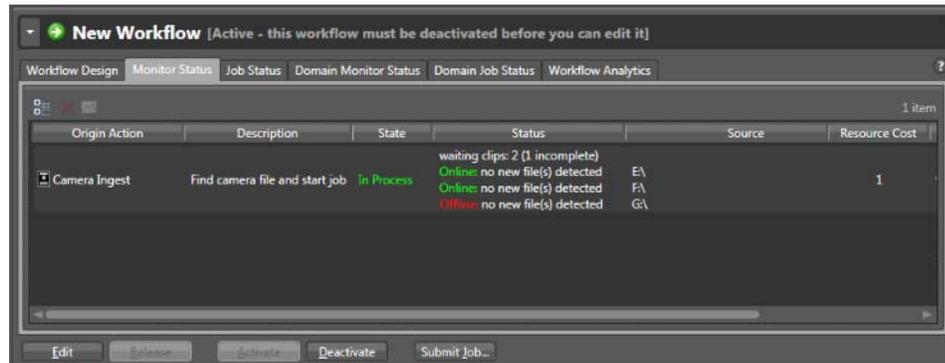
Click any column to make it primary, sorting it in ascending/descending order.

These topics provide information on using the Monitor Status tab:

- [Viewing the Monitor Status of Camera Ingest Actions](#)
- [Using the Monitor Status Toolbar](#)
- [Viewing Origin Action Record Details](#)

Viewing the Monitor Status of Camera Ingest Actions

For workflows beginning with a Camera Ingest action which has been configured to monitor multiple locations—a card reader with multiple drives, for example—the Monitor Status workspace displays additional details.



In the status column, you can determine the number of shots being processed—as well as incomplete shots where the action is waiting for files before submitting the job. The Source column identifies the location—for example, drive letters on a card reader.

Using the Monitor Status Toolbar

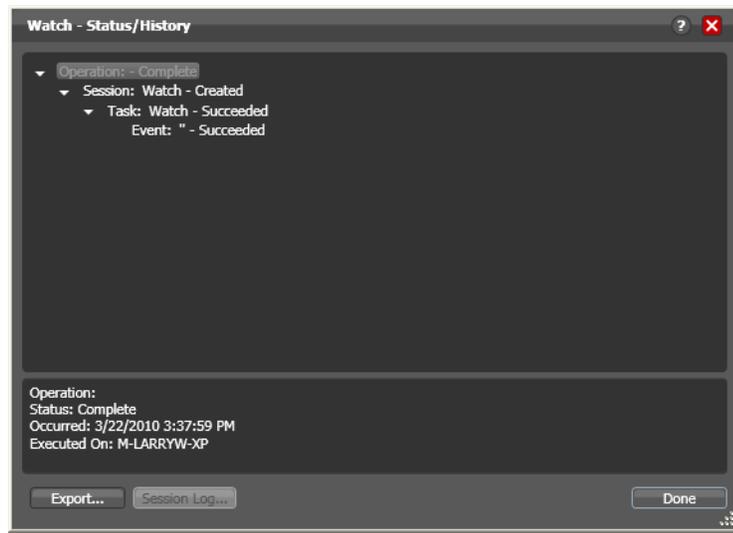
The Monitor Status workspace provides the following buttons in the toolbar:

- **Show in Groups button** —Click to organize records for the selected **action** by group, based on the primary column—the one selected. Click again to turn grouping off. For example, if you select State as the primary field in the table and display Groups, Workflow Designer sorts the records by state: In Process and Complete. When displayed in groups, click the Down arrow on the table entry to display the origin records in this group (In Process, or Complete, for example).
- **Delete button** —Click to delete the selected record(s). Or, right-click on the record, and select Delete. You can only delete records whose **origin actions** are complete—that is, the session has ended because the workflow was deactivated.
- **Status button** —Click to display the selected workflow's **origin action** details. Or, right-click and select View Status.

Viewing Origin Action Record Details

To display details about the origin (the first) action for the selected workflow, double-click the row (or select a row and click the Status button).

The Status/History dialog (the figure and the figure) provides details about the status of the [origin action](#).

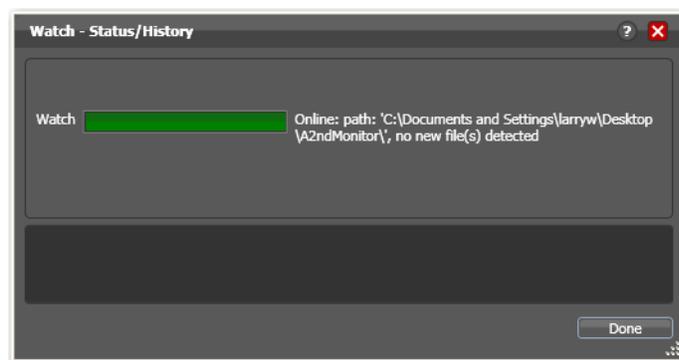


When an [action](#) is complete, the Status/History dialog displays information on each aspect of the action's execution. You can use this information to review details about its execution, and when an action fails, you can use this information to determine why and correct the problem.

The text in the upper panel of the Status/History dialog provides a summary of some aspect of action execution. To display more information related to a line in the upper panel, click on the line. The detailed information appears in the lower panel.

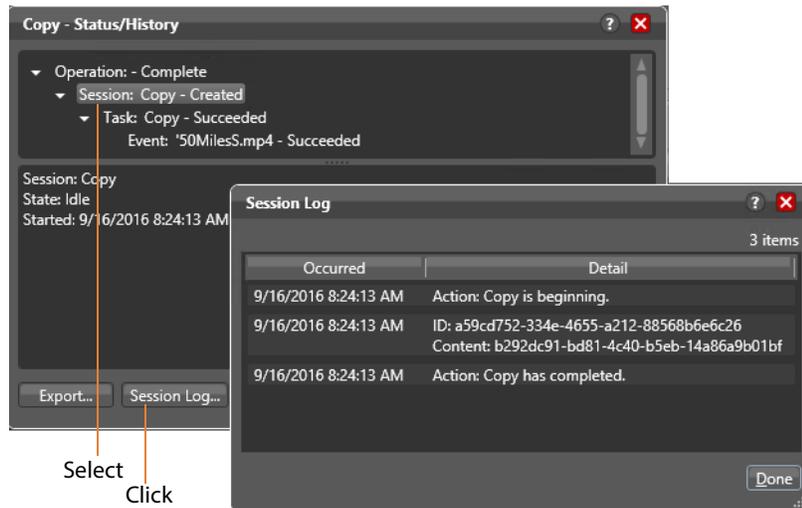
Click the symbol to the left of the summary lines in the upper panel to hide or display subordinate summary lines.

When an action is *In Process*, (Queued, Paused, In Process, or Waiting states), the Status/History dialog displays a progress bar, the path of the target directory, and the status.



For [jobs](#) in the Success, Ignore, and Failure states, the Status History dialog displays the following buttons:

- *Export*—Click Export to display a File System dialog, and save the status/history information as an XML file. You can send these files to Telestream for support issues, or export them for processing in other systems.
- *Session Log*—To display a session log, select a session in the upper panel and click Session Log.



The session log displays session activity entries, if any, including which variables have been provided to each [action](#). This information can be helpful when debugging the use of variable, or when working on an issue with Telestream Customer Service.

Click Done to close the window.

Monitoring and Managing Jobs

To monitor and manage jobs, display one of these two workspaces:

- Select a workflow and click the Job Status tab (or click File > Job Status)
- Click the Domain Job Status tab (File > Domain Job Status).

The Job Status and Domain Job Status workspaces each display a list of jobs and provide job details. Use these workspaces to monitor media processing, set priorities, view binders and associated files, and to pause and resume jobs in progress.

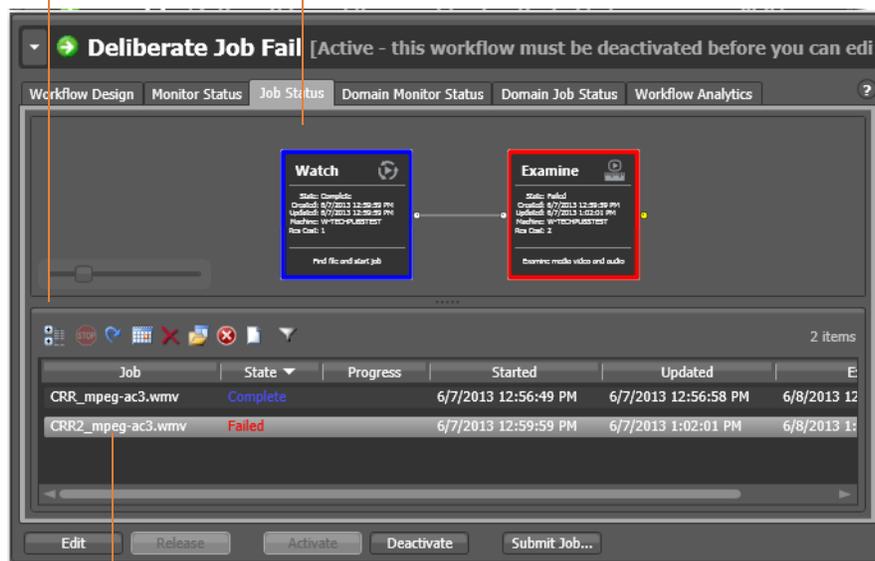
Note: When the Include Completed Jobs option is enabled in the Console (under Settings & Options), these tables also display all jobs that have completed.

These workspaces are useful when you're performing operator-related tasks or when you're managing or performing domain-wide production media processing. The only difference between the two tabs is one of scope.

The Job Status workspace allows you to select a workflow in your user account and display all of this workflow's jobs. The Domain Job Status workspace displays all the jobs currently executing in the domain, plus all completed jobs, if the Include Completed Jobs in Domain Job Status is enabled (Vantage Management Console > Settings & Options).

Job Status toolbar

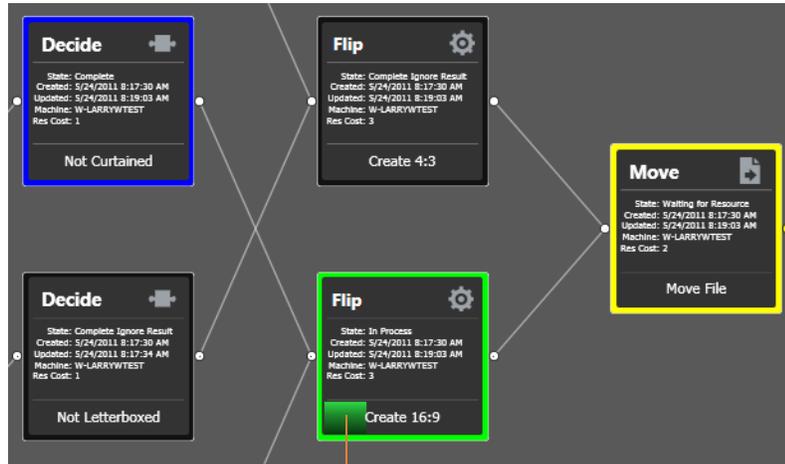
Real-time view of transaction processing.



Each row is a job processed by the selected workflow, indicating status and other details.

When an action is executing, it is displayed with a green border, and a progress bar displays at the bottom of the action, indicating execution progress. This indicator

provides a relatively accurate prediction of how far along the total execution has progressed.



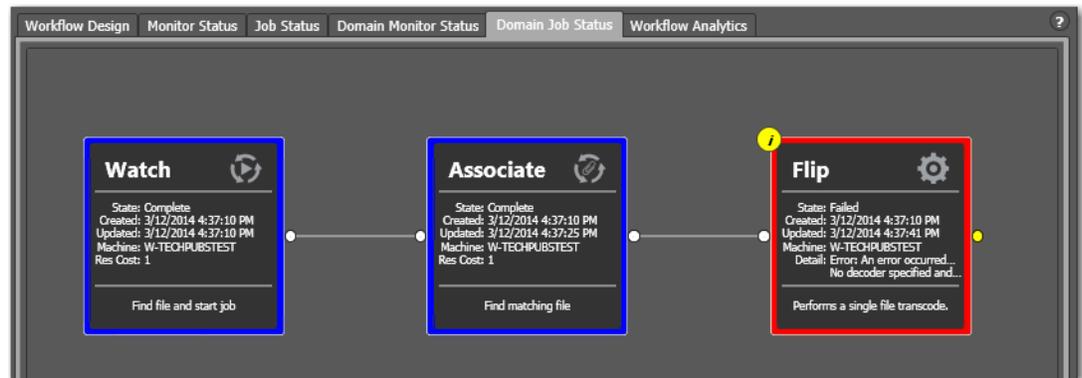
The progress bar indicates progress for this action.

The following topics provide additional information for using the job status workspaces:

- [Viewing Actions in Detailed Action View](#)
- [Using the Jobs Table](#)
- [Using the Job Status Table's Toolbar and Context Menu](#)
- [Stopping All Jobs in the Domain](#)

Viewing Actions in Detailed Action View

To view [actions](#) in detailed action view, select View > Detailed Action View. In this view, each action displays its state, creation and update dates, and [resource costs](#) directly on the action.



Action States

Each action in the selected workflow displays a color-coded border to identify its current status in real time or final status at the end of the job:

- *Green*—In Process. The action is currently executing.
- *Blue*—Complete. The action completed successfully.
- *Red*—Failed. This action has failed or an upstream action failed, causing this action to not execute, and replicate the failed state.
- *Black*—Ignored or Waiting on License. This action was not executed due to a Perform On state mismatch or is executing in some exception-processing way (action-dependent) because a license is not present.
- *White*—Idle. The action is ready to execute pending the assignment of a service to execute it.
- *Yellow*—Pending or Waiting for Intervention. The action is ready to execute pending the availability of the required resources or the execution was interrupted for some reason, and the service requires intervention from a user.
- *Light Gray*—Paused or Suspended. The action has been paused by a user or suspended by a higher-priority action.
- *Magenta*—Stopped by User. The action was stopped by user intervention.
- *Orange*—Waiting to Retry. The action attempted unsuccessfully to execute to completion, and is currently waiting to re-execute.
- *Purple*—Waiting on a Service. No service of the required type is running that can execute the action. For example, no Transcode Service is running to execute a Flip action.
- *Light Green*—Waiting due to Run On Rule. The action is waiting due to a run-on rule that must be satisfied before it can execute. For example, a Flip action requires a Lightspeed server, but no Lightspeed servers are online.
- *White*—The action is waiting to be assigned to a service. Upstream actions have not yet completed execution.
- *Yellow*—Waiting execution. Even though the action has been accepted by a service, there is no slot in which to run the action.

Note: At any time before an action starts executing, it may be re-assigned (re-balanced) to another service which *can* execute it.

Completing without errors does NOT mean that the action performed the task—an action may be configured to execute ONLY when a previous action succeeded or when a previous action failed—thus, an action may complete without errors, and perform *no task at all*.

Using the Jobs Table

Click any column title in the Jobs table to make it the primary column and sort it in ascending or descending order. The Jobs table presents information about the job in the following columns:

Job—The Job column displays the name of the file submitted to start the job, and the type of submission: *Manual Submit*, for example.

Workflow (Domain Job Status Only)—The Workflow column displays the name of the workflow that is processing or has processed this job.

Category (Domain Job Status Only)—The Category column displays the category of the workflow.

Note: Because the Domain Job Status workspace displays all of the jobs in the domain, the Jobs table also displays two additional columns of information not found in the Job Status workspace: Workflow and Category. It also displays an Emergency Stop button in the bottom right-corner. For details, see [Stopping All Jobs in the Domain](#).

State—This column displays color-coded key words to identify the status of the job:

- *In Process*—the job is active (being processed).
- *Paused*—the actions in this job have been paused.
- *Complete*—all of the actions in this job have completed successfully.
- *Failed*—one or more of the actions in this job have failed.
- *Waiting*—the job is active, but is currently waiting for a resource (a service) to accept and process one of the actions in the workflow.
- *Stopped by User*—the job was stopped by a user.
- *Waiting to Retry*—the job is active, but is currently waiting for one of the actions in the workflow to re-execute.

Progress—The information displayed in the Progress column depends on the Detailed Job Progress setting in the Vantage Management Console.

If Detailed Job Progress is disabled, the Progress column displays the percentage of actions that are complete at the moment. For example, if you have a 10 action workflow and the 4th action is currently executing, Vantage will report the workflow as 30% complete.

If Detailed Job Progress is enabled, the progress column displays a percentage value of the current amount of time consumed compared to the total estimated time for the job to complete. Using the job's start time to determine how long the job has been executing, you can use the progress percentage to extrapolate the approximate completion time, assuming the load on the domain remains relatively constant.

Note: To change the Detailed Job Progress setting in the Vantage Management Console, start the console and click on Settings & Options > General Tab to set the Detailed Job Progress check box.

Started—Displays the time the job started by date and time.

Updated—Displays the last time the job record was updated (typically, when the job ended) by date and time.

Expires—Displays the time the job expires, and will be removed from the database (along with its binder). To change the expiration period for a workflow, select it and click on the title to display its detail panel, where the Expiration period is displayed. See [Viewing and Specifying Workflow Details](#).

Using the Job Status Table's Toolbar and Context Menu

The toolbar and context menu provide a variety of commands for managing jobs. The toolbar is displayed directly above the table.

The context menu has the same set of commands, with the exception of the Jobs Filter button (at far right in the toolbar), which is not specific to the selected job. To display the context menu, right-click on any job in the table.

- *Show in groups* —Organizes **jobs** by group, based on the primary column—the one you have selected. Click again to turn grouping off.
- *Stop* —Halts processing on this job. When you stop a job in process, each **action** for that job is notified to stop its own transaction. When all actions have been stopped, the job is considered complete, in a user-stopped state.
- *Restart* —If a job was stopped or it failed, re-starts and continue processing where it was stopped. Actions that fail or are stopped by a user are re-executed. When you restart a job, it is started as a first-time job again. This affects the execution of **retry rules**.
- *Set expiration* —Modifies the default expiration time for this job. Workflow Designer displays the Set Job Expiration dialog—specify a new expiration date and click OK.
- *Delete* —Deletes the selected job row(s). Or, right-click and select Delete.
- *View Binder* —Displays the selected job's **binder**. Or, right-click an action or the job row in the table, and select View Binder. For details, see [Viewing Binders](#).
- *View Job Errors* —Displays details about errors encountered in the job.
- *Job Report* —Creates a job report. Select one or more jobs in the table, and click on the Job Report button. For details, see [Generating Job Reports Manually](#).
- *Jump to Workflow* —This button only displays in the Domain Job Status workspace. To jump directly to the workflow for this job, select a job in the table and click the button.

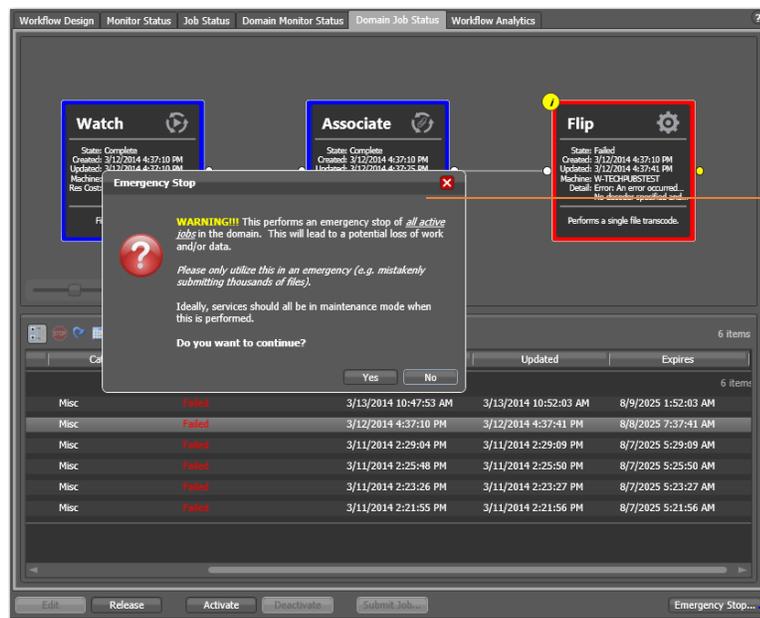
- **Jobs Filter** —Displays only jobs that contain specific text in the job name. Enter the text to begin filtering displayed jobs. Delete the text (or just close the filter by clicking the filter button) to display all jobs again.

Stopping All Jobs in the Domain

If you get in a situation where you need to immediately stop all running and queued jobs in the domain, you can use the Emergency Stop button, which is located in the bottom right corner of the Domain Job Status workspace.

Note: If possible, Telestream recommend using the Management Console to place the services in maintenance mode (or the Windows Services Console to stop the services) before using this command.

After issuing a command to stop all jobs, it may take several minutes to complete. The time to completion is dependent on the volume of affected jobs in the database and the consequent load on the computers in the domain.



After clicking the Emergency Stop button to stop all of the jobs in the domain, Workflow Designer displays a warning dialog.

Emergency Stop button.

To stop all running and queued jobs in the domain using this button, follow these steps

1. Click the Domain Job Status workspace.
2. Click on the Emergency Stop button in the bottom right corner. Workflow Designer displays a warning dialog.

WARNING: The Emergency Stop button stops all active jobs in the domain, and can not be reversed. This will lead to a potential loss of work and/or data. You should only utilize this command in an emergency. (For example, mistakenly submitting thousands of jobs.) Ideally all services should be in maintenance mode before executing this command.

3. Click Yes to Continue.

Workflow Designer issues the Emergency Stop command to the domain database.

Generating Job Reports Manually

Workflow Designer allows you to generate [job](#) reports for the selected job or jobs, as comma-separated value (CSV) files. You can open these reports in spreadsheet programs and other programs that display CSV files, or you can use them in other systems, such as databases or media asset management systems.

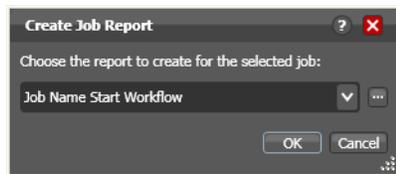
Note: You can also configure a workflow to automatically generate a job report each time the workflow executes. See [Enabling Automatic Reports in the Domain Management Console](#).

Each job report is based on a job report configuration you select (see [Managing Job Report Configurations](#)).

Note: If there are no job report formats, Workflow Designer displays a dialog that enables you to create one. Click OK to display the Job Report Manager ([Managing Job Report Configurations](#)).

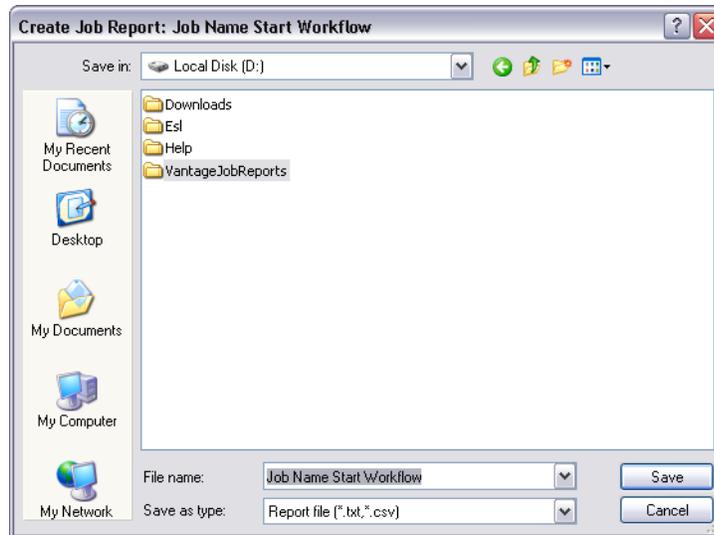
To create a job report, follow these steps:

1. Select one or more jobs in the Job Status table.
2. Click on the Job Report button  in the toolbar (or right-click the jobs and select Create Report). Workflow Designer displays the Create Job Report dialog.



3. In the Create Job Report dialog, select a report format from the list and click OK.
You can also click the browse  button to display the Job Report Manager window. For information about this window, see [Managing Job Report Configurations](#).
4. After selecting a report format, select where you want to save the CSV report file for the selected jobs, as shown in the following figure.

Vantage displays the File System dialog, which you can use to select the server and directory where you want the CSV report file for the selected job or jobs stored, as shown in the following figure.



Optionally, enter a new name for the job report file (or append a date or other significant qualifier) and click Save to process the report and save the file as a CSV file.

When the report file has been generated, Vantage displays a dialog to indicate where the file was saved. Click OK to close the dialog.

Managing Job Report Configurations

Before you can generate job reports, you must create at least one job report configuration. You can create multiple configurations; one for each type of job report you want to generate.

You use the Job Report Manager to create, edit, and delete [job](#) report configurations. (The Job Report Manager is also available in the Vantage Management Console.)

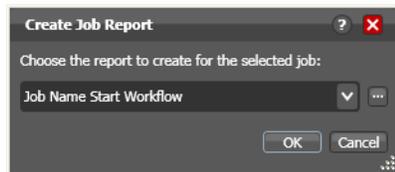
The following sections describe these tasks:

- [Displaying the Job Report Manager](#)
- [Creating a New Job Report Configuration](#)
- [Choosing the Report Columns](#)
- [Duplicating a Job Report](#)
- [Deleting a Job Report](#)

Displaying the Job Report Manager

To display the Job Report Manager, follow these steps.

1. Display the Job Status or Domain Job Status workspace.
2. Select a job from the Job table.
3. Click the toolbar Job Report button  to display the Create Job Reports dialog:

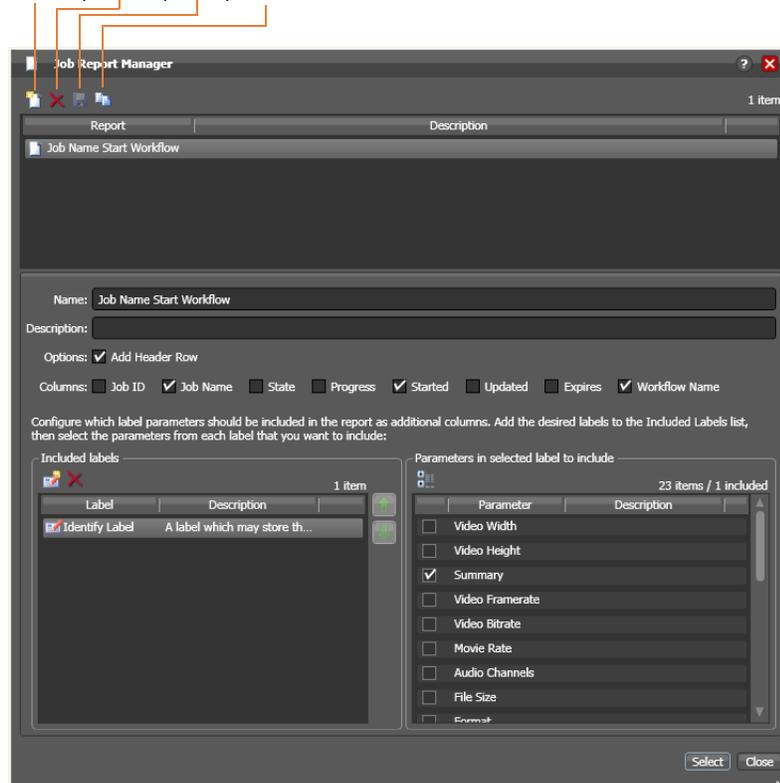


4. Click the browse  button to the right of the report menu.

Workflow Designer displays the Job Report Manager window.

Toolbar buttons:

Create | Delete | Save | Duplicate



Creating a New Job Report Configuration

To create or edit a job report configuration, do the following:

Note: Vantage domain administrators can also create report formats with the Vantage Management Console.

1. To create a new job report configuration, click the Create report button . Workflow Designer adds a new report to the report list and selects it.
2. To edit a job report configuration, select it from the list.
3. Enter a name in the Name field.
4. Optionally, enter a report description in the Description field.
5. Click the Save button .

To include or exclude a header row in the job report:

1. Check the Add Header Row check box to include the header row, or clear the checkbox to exclude the header row.
2. Click the Save button .

Choosing the Report Columns

You can configure reports to include or exclude the following columns:

- Job ID
- Job Name
- State
- Progress
- Started
- Updated
- Expires
- Workflow Name
- Additional columns for metadata label parameters

When you choose to display a column for a metadata label, the column displays the label value.

To define which columns appear in a report, do the following:

1. Under Columns, check (display) or clear (hide) the check boxes for the columns you want to display.
2. To add or delete columns for metadata labels, do the following:
 - a. Click the Add Column button  to display the Select Label Parameters for Columns dialog.
 - b. In the Labels panel, select a label for which you want to display parameters.
 - c. In the Parameters panel, check the checkbox for any parameter you want to display, and clear the checkbox for any parameter you do not want to display. To toggle the display of parameter by category, click the Category button . One display state displays parameters with category headings; the other displays them without category headings.
 - d. Repeat parameter label selection until all labels are properly selected.
 - e. Click OK.
3. To change the displayed order of parameter labels, select a label in the list and use the green up  and down arrow  buttons to move the label in the list.
The top item in the list appears to the right of the columns listed in the Columns row, and to the left of all the other label columns. The last item in the list becomes the last column on the right.
4. Click the Save button .

Duplicating a Job Report

When you duplicate a [job](#) report, a new report is created with a modified report name. All settings in the duplicate report match those in the original report.

To duplicate a job report, do the following:

1. Select the report to duplicate.
2. Click the Duplicate button .
3. In the Name text box, enter a name for the duplicate report.
4. In the Description text box, optionally enter a description for the duplicate report.
5. Click the Save button .

Deleting a Job Report

To delete a [job](#) report, select the report and do the following:

1. Click the Delete button .
2. When the confirmation dialog displays, click OK.

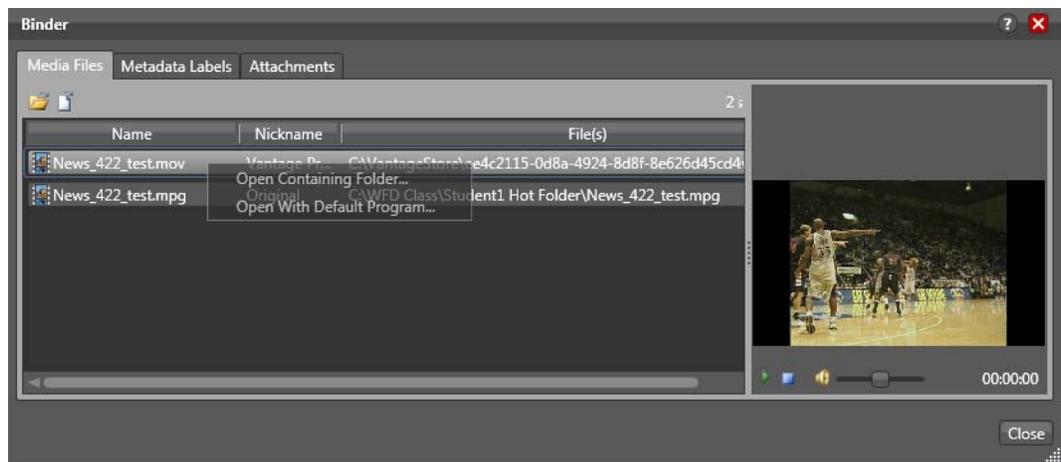
Viewing Binders

The Binder panel displays information about files ingested or generated in a [job](#) (or subsequent jobs, when the Register [action](#) is configured to overwrite [binders](#) when a file of the same name is submitted (Conflict Resolution)).

Assets in a binder can include media files, metadata labels, and attachment files.

To view the binder for the selected job, choose:

- Click the binder button  in the toolbar
- Right-click on any action, or job row in the table, and select View Binder.
- Double-click the job row in the table.



Media Files tab—Displays a list of media files ingested or created in the job, including the file’s path, [nickname](#), and filename. To the right is a WMV player, where you can preview the selected file provided that it is playable by Windows Media Player (typically, WMV, AVI, and ASF files, depending on your configuration).

Alternatively, you can right-click on any file and select one of two options:

Open Containing Folder—displays the Windows directory where the file is stored.

Open With Default Program—opens the file in the program specified as the default program to open these types of files.

Note: When running Workflow Designer on Windows Server 2008, unless the Desktop Experience feature is installed, you can’t review media. For details, see Windows Server 2008 Requirements in the Vantage Domain Management Guide. See also [Configuring Server 2008 to Solve Display Problems for Vantage Programs](#).

Metadata Labels tab—Displays metadata labels in the [binder](#), their parameters and values. (You cannot edit values in this viewer.)

Attachments tab—Displays a list of [attachment](#) files, including each file's path, [nickname](#), and filename.

Controlling Action Execution in Jobs

These topics describe how you can control actions in your jobs:

- [Pausing and Resuming Flip Actions](#)
- [Pause for Priority in Flip Actions](#)
- [Setting Action Execution Priority](#)

Pausing and Resuming Flip Actions

To pause and resume Flip [actions](#) in a [job](#) in progress, right-click on the action and select Pause from the context menu. To resume a paused action, right-click on the job and select Resume from the context menu.

You cannot pause actions in certain states or in certain workflows. For example, you cannot pause an action that has failed. Also, you cannot resume an action downstream of another failed action, without restarting the first failed action, etc.

Pause for Priority in Flip Actions

Pause for Priority is an automatic feature of Flip actions. If a Transcode Service is saturated (that is, it is performing the maximum number of [jobs](#) it is set for); then Vantage will queue up incoming jobs and wait for a slot to become available.

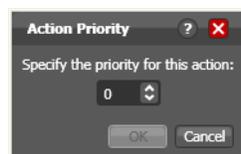
For example, a Transcode Service is configured to run 2 simultaneous jobs; it receives three jobs (A, B and C); jobs A and B begin execution (the service was idle prior to this) and C is queued until either A or B completes, at which point C will execute).

Pause for Priority comes into play if job C has a higher execution priority than job A or B. In this case, job A is paused and job C begins processing immediately. When Job C or B completes; then A (which was previously paused) returns to processing.

Setting Action Execution Priority

You can modify the execution priority of actions in a running job, when they are in the Wait, Pause, or Running states. You cannot set an [action](#) priority for a completed action. To change the priority of an action that has not completed, do the following:

1. Right-click the action and select Priority to display the Action Priority dialog.

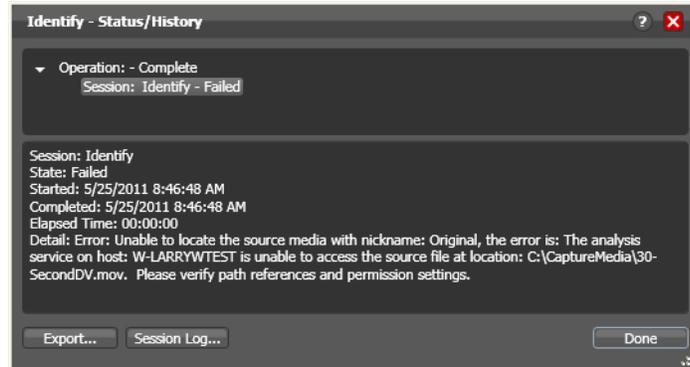


2. Change the priority value (larger numbers means higher priority), and click OK to modify the action's priority in this [job](#).

Viewing Action Status

To view details about the status of any **action** in a **job**, select the job in the jobs list, right-click the target action in the workflow, and select Status.

The Status/History dialog provides details about each aspect of the action's execution. You can use this information to gather details about its execution, and when an action fails, you can use this information to determine why and correct the problem.



Each line in the upper panel of the Status/History dialog provides a summary of some aspect of action execution. To display more information related to a line in the upper panel, click on the line. The detailed information appears in the lower panel.

The symbol to the left of the summary lines in the upper panel allow you to hide or expose subordinate summary lines. Click a symbol to hide or display subordinate summary lines.

Export—Click Export to display a File System dialog, and save the status/history information as an XML file. You can send these files to Telestream for support issues, or export them for processing in other systems.

Session Log—To display a session log, select a session in the upper panel and click Session Log.

Click Done to dismiss the Status/History window.

Using Workflow Analytics

Use this chapter to learn how to use Workflow Designer to analyze workflows and [job history](#) to identify problems and improve overall system performance.

- [Workflow Analytics Overview](#)
- [Using the Workflow Analytics Panel](#)
- [Performing Bottleneck Analysis](#)
- [Performing Execution Analysis](#)

Note: Features in editions for which you do not have a [license](#) are disabled, and indicate that you need a license to use them.

Workflow Analytics Overview

Workflow analytics is an optional, licensed feature in Workflow Designer, and requires a Reporting and Analytics license. Workflow analytics enables you to visually analyze workflows and [job](#) history to identify problems and improve overall system performance.

In Workflow Designer, workflow analytics enables you to view jobs (based on the job history currently in the [database](#)) on a case-by-case basis to:

- Identify performance bottlenecks by [action](#) in a workflow
- Analyze workflow execution as a result of decisions in a workflow
- Visualize the progress of multiple jobs submitted to a workflow
- Rank workflows and actions, based on processing time consumption.

Note: Because workflows may be modified over time, jobs run in the selected workflow prior to the last change are ignored.

Vantage administrators and personnel responsible for designing and implementing workflows can use this information to modify workflow design and improve Vantage domain performance and efficiency.

Note: In the Management Console, workflow analytics enables you to analyze workflows at the domain level. For details on using workflow analytics in the Vantage Management Console, click the Help button in the toolbar to display the *Vantage Domain Management Guide*.

Workflow analytics automatically includes new jobs that are submitted, as appropriate, displaying them in the Jobs table and recalculating metrics.

Using the Workflow Analytics Panel

Click the Workflow Analytics tab (or click File > Workflow Analytics), and select the workflow in the Workflows panel to view **job** history information, which helps you identify performance bottlenecks and collect workflow processing statistics.

Jobs Table with toolbar

Analysis Options

Actions display the average execution time, and stack rank time relatively by color—green (fastest) through red (slowest).

To select a workflow to view, use the Workflows list to the left of the Workflow Analytics tab. Open the appropriate workflow category and click on any workflow to select it. You can then view all of the job history records for the selected workflow in the Workflow Analytics tab.

After making your job selection (see below), click the Run Analysis button to begin near real-time display of the analytics data. To stop calculating and updating the data (or to change the jobs you want to analyze), click Stop Analysis.

The following topics provide additional information:

- [Using the Jobs Table Toolbar](#)
- [Using the Jobs Table](#)

Using the Jobs Table Toolbar

The toolbar for the Jobs table displays buttons for the following commands:

Groups—Click to organize the **jobs** by group, based on the primary column—the one you have selected. Click again to turn grouping off.

Filter—Click to display (and thus determine the set) only jobs that contain specific text in the job name. Enter the text to begin filtering displayed jobs. Delete the text to display all jobs again.

Using the Jobs Table

Click any column in the Jobs table to make it the primary column and sort it in ascending or descending order.

When you first select a workflow, no jobs are selected, so all jobs are considered in calculating the metrics. Select any job or jobs (shift-click or control-click) to view the selected set's analytic details.

To de-select all jobs and return the table to its original state, select one record, then control-click to de-select it.

Performing Bottleneck Analysis

Select Bottleneck Analysis from the popup menu on the far right. Workflow Designer displays elapsed time for the selected records in the [job](#) history set.

In bottleneck analysis (which is enabled by default), you can identify the longest running [actions](#) in a workflow, based on color and time values.

Color values are applied to each action from green to red on a sliding scale, based on a comparison of the average of all selected job records. The shortest average execution time displays the darkest shade of green; the longest displays red. Those in between display color values through yellow-green, yellow (average), and orange.

Numeric values on each action display the average execution time of the actions which ran, based on the selected job records.

When performing bottleneck analysis, choose:

- *Include Waiting Time*—Check to add wait time to execution time and display the combined total time for each action. Wait time includes time spent in a Waiting state and a Paused state. Uncheck to display only execution time.
- *Count Non-running Actions*—Check to include the execution time (0 seconds) of actions that did not run, thus providing a weighted bottleneck analysis based on which branches in a workflow executed, based on decision actions. This allows you to focus upon the actions which are bottlenecks in real-world operations.

Uncheck to disregard non-running actions when calculating the execution time. This allows you to find the most expensive actions, regardless of whether or not they are commonly run.

Performing Execution Analysis

Select Execution Analysis from the popup menu on the far right. Workflow Designer displays percentile and numeric values for the selected records in the [job](#) history set.

In execution analysis, you can determine which percentage and number of [actions](#) executed, based on the selected job history set, based on color and percentile values.

Color values are applied to each [action](#) from black to green on a sliding scale. The lowest average execution displays the darkest shade of black; the highest displays green.

Darker actions are those that have not executed yet (near zero percent). Dark green actions are average (near 50 percent), and the highest percentile executing actions are bright green (approaching 100 percent).

For each action, the percent of executions completed is calculated against the total number of jobs, based on your selected job criteria.

When using execution analysis, choose your job criteria:

All Jobs | *Only Completed Jobs* | *Only Successful Jobs*—Select to include all selected jobs regardless of their status, only completed jobs (thus excluding running or partially completed jobs), or only successful jobs in the calculations.

Using Workflow Portal

This chapter describes the Vantage Workflow Portal, a client program (also available in a web version) designed for customizable, operator-driven media processing. Several Workflow Portal configurations are provided to implement specific operational needs. The configurations allow you to customize functionality and the user interface and generate a specific output (for example, DPP configurations).

Workflow Portal configurations are created and configured in the Vantage Management Console, and loaded in the Workflow Portal application when it is launched, to perform specific media processing tasks.

Note: Workflow Portal is an optional, licensed Vantage feature. For details about licenses, see Vantage Workflow Portal Licensing in the Domain Management Guide.

The Windows client provides optimum performance and the full feature set. The web client can be used on any computer with a supported web browser (see [Web Application Browser Requirements](#)) and a network or Internet connection to your [Vantage domain](#). Not all configuration types are usable in the web client.

Most topics described here apply to both clients, except where noted.

The following topics introduce and describe the Workflow Portal:

- [Workflow Portal Overview](#)
- [Workflow Design Guidelines](#)
- [Starting a Workflow Portal Session](#)
- [Changing or Reloading a Configuration](#)
- [Managing Workflow Portal Projects](#)
- [Performing Workflow Portal Tasks](#)
- [Windows Client Menus](#)
- [Web Client Menus](#)
- [Troubleshooting Workflow Portal](#)

Note: For detailed information on how to operate each type of Workflow Portal configuration, see [Using Workflow Portal Configurations](#).

Workflow Portal Overview

Video processing workflows frequently require some form of operator intervention during media processing. For example, an operator might run media through an ingest workflow to create a proxy, scrub and set trim points, review and add/edit metadata and variables, and then submit media to another workflow for production processing.

Note: For basic information on using Vantage client programs, see [Vantage Client Programs Overview](#).

On Windows Server 2008, you may have problems minimizing windows if you maximize them by dragging them to the top of the monitor (*AeroSnap*). To disable *AeroSnap*, go to *Control Panel > Ease of Access Center > Change how your mouse works*. Check *Prevent windows from being automatically arranged when moved to the edge of the screen*.

- [Key Applications](#)
- [How Workflow Portal Works](#)
- [Key Workflow Portal Features](#)
- [Workflow Portal Configuration Types](#)
- [Implementing Workflow Portal-based Media Processing](#)

Key Applications

Key applications of Workflow Portal include:

- *Highlight Extraction From Archive Files*—An operator marks in and out timecodes and chooses the timecode for a thumbnail, and processes the media in a workflow the creates the clip.
- *Promo Preparation*—An operator marks the voice-over and graphics entry points on the timeline. A subsequent workflow reprocesses the promo for multiple markets, days, and languages, based upon this input.
- *Clip Stitching*—An operator can select media files of various metrics and define clips within that media, then submit the EDL to a stitching workflow to combine the clips and render them into a single output file.
- *VOD Distribution*—An operator creates a playlist of clips and enters metadata. A subsequent workflow merges (*stitches*) the clips into a single media file and transforms metadata for distribution.
- *VOD Digital Ad Insertion*—An operator defines ad locations for dynamic ad insertion by the cable vendor, and submits jobs for assembly of CableLabs VOD content and provisions it for dynamic ad insertion (DAI).
- *TrafficManager*—An operator searches catalogs, then reviews and submits commercial inventory for processing to a specific publishing workflow.
- *TrafficManager Syndication*—An operator searches catalogs, then reviews and submits syndicated inventory for processing to a specific publishing workflow.

- *DPP Package Preparation*—An operator enters DPP metadata, marks programme segments, and submits the assets to a workflow. Vantage adds bars, generates slates, and encodes to the appropriate MXF format with DPP metadata to create a DPP package.
- *CML Preparation*—An operator creates clips, and submits the auto-generated composition (CML file) to a Conform-based workflow to generate the specified output.
- *Re-timing of assets*— An operator selects a media file and submits it to a Tempo-based workflow for re-timing— intelligently decreasing or increasing the running time of shows and segments. Tempo utilizes new time compression algorithms that deliver superior quality and faster turn-around times.

How Workflow Portal Works

This figure depicts how Workflow Portal is typically used in a [Vantage domain](#).



Operator-access to [job](#) variables and media metadata is a powerful feature that enables operators to control the operation of the next workflow. For example, operators can edit embedded and label metadata parameters, modify variables to control content routing, or select other processing options in the next workflow.

Key Workflow Portal Features

Workflow Portal provides several features for performing operator-intervention media processing workflows. Workflow Portal has a customizable user interface where components and features are controlled by a configuration file, created in the Management Console, and loaded in Workflow Portal when launched by an operator.

Based on your application, these features allow operators to:

- Browse Vantage catalogs and Windows servers for media (saved in [binders](#)) from completed [jobs](#) and submit them to workflows.

- Create an [Edit Decision List \(EDL\)](#) of clips for stitching with a [Flip action](#) workflow (Windows client only).
- Create a [Composition \(CML\) file](#) of clips for stitching with a [Post Producer Conform](#) action workflow (Windows client only).
- Create/review/update XML-based or label-based metadata.
- Review/edit embedded metadata.
- Preview/scrub media proxies.
- Mark in/out trim points on an asset's timeline.
- Mark media as approved or rejected.
- Supply run-time values to variables to use in the next workflow.

Workflow Portal Configuration Types

Vantage provides several configuration types. Each type has specific functionality, implementing a common media processing application. Here are the configuration types as specified in the management console, along with their common names:

- *Browse Catalogs (copy binder)*—Copy Binder Portal
- *Browse Catalogs (forward binder)*—Forward Binder Portal
- *Browse Windows Network (create binder)*—Windows Portal
- *Create EDL from Catalogs (create binder)*—EDL Portal
- *Create CML from Catalogs (create binder)*—CML Portal
- *Create DPP from Catalogs (create binder)*—DPP Portal
- *Create VOD from Catalogs (create binder)*—VOD Portal
- *Re-time Asset from Catalogs (create binder)*—Tempo Portal
- *Syndication*—Syndication Portal

The names on the left match the names a domain administrator sees when creating a Workflow Portal configuration in the management console. The shortened names that appear after the dash are the common names used in this and other guides.

Note: Only the Browse Catalogs Copy Binder and Forward Binder configurations can be used in both the Workflow Portal web client as well as the Windows client. All other configurations can only be used in the Windows client.

The Copy Binder and Forward Binder, as well as the Create EDL, CML, DPP, Tempo, and VOD configurations allow operators to browse Vantage [catalogs](#) and select [binders](#) that have been registered by a previous job for processing.

The Browse Windows Network configuration allows operators to browse a Windows server (*not* a Vantage catalog) to select media files. (Binders only exist in the context of a Vantage catalog.)

Each type of configuration causes Workflow Portal to operate differently, to achieve its intended result. The operation of the basic configurations are explained in detail in [Using Workflow Portal Configurations](#). Configurations offered as Vantage editions are described in a separate user guide.

Each of the configuration types are summarized in these topics:

- [Browse Catalogs Copy Binder and Forward Binder Configurations](#)
- [Browse Windows Network Configuration](#)
- [Create EDL from Catalogs Configuration](#)
- [Create CML from Catalogs Configuration](#)
- [Create DPP from Catalogs Configuration](#)
- [Create VOD from Catalogs Configuration](#)
- [Re-time Assets from Catalogs Configuration](#)
- [Syndication Configuration](#)

Browse Catalogs Copy Binder and Forward Binder Configurations

The purpose of both Browse Catalogs configurations is to enable operator-intervention media processing on Vantage catalog-based media. That is, the media has already been processed by a Vantage workflow and registered in the catalog, potentially along with other job-related assets: attachment files, metadata labels, etc. The operator can enter and edit label-based metadata for the selected media, and also update variables as required for the workflow. Browse Catalogs configurations are intended for processing a single file; they do not support creation of a clip list and stitching.

Both types of configurations are supported in the Workflow Portal web app and the Workflow Portal Windows client.

In a Browse Catalog *Copy Binder* Portal, the operator can browse [catalogs](#), select a [binder](#) and submit a job to a workflow to process the media—*after* clicking the Submit button. When the operator clicks the Submit button, the selected binder is copied—duplicated and used only as a template for the current job—leaving the original binder unchanged and intact in the catalog for future use or re-submittal. The job (as always) creates a binder during execution; it may or may not be registered by the workflow into a catalog for further utilization.

In contrast, in a Browse Catalogs *Forward Binder* Portal, the operator browses a [catalog](#) and selects a [binder](#)—*before* clicking the Submit button. The selected binder (with any changes the operator makes) is submitted to the workflow—without making a copy.

Forward binder mode allows the workflow to modify the contents of the original binder, and those modifications will be visible the next time the user refreshes the binder in the portal.

Browse Windows Network Configuration

The general purpose of the Browse Windows configurations is to enable operator-intervention on media processing, where the media files are stored directly on a Windows platform. The operator can review and edit label-based metadata for the selected media, and also update variables as required for the workflow.

The Browse Windows configuration is supported only in the Windows client.

The Browse Windows Network Portal (Windows Portal for short) allows you to select one or more media files from servers on a Windows network and submit them to target workflow(s). The job (as always) creates a binder during execution; it may or may not be registered by the workflow into a catalog for further utilization.

Create EDL from Catalogs Configuration

The EDL Portal enables you to automatically create an Edit Decision List (EDL) which the operator submits to a Flip-based workflow to process the EDL. When creating an EDL, the operator selects the media files to submit by browsing Vantage catalogs and selecting one or more binders created from previously-completed jobs.

The Create EDL from Catalogs configuration is supported only in the Workflow Portal Windows client.

You can mark start and end points to clip your input media files, and then stitch the selected clips together in the workflow to which you submit the EDL. The EDL configuration publishing workflow must use the Flip action to stitch and encode the media. The EDL Portal requires that all clips have the same frame rate, frame size and video codec.

The operator can also review and edit label-based metadata for the selected media, and also update variables as required for the workflow. The job creates a new binder from assets in or more source binders and updates it during execution; it may or may not be registered by the workflow into a catalog for further utilization.

Create CML from Catalogs Configuration

The CML (Composition Markup Language) Portal is designed to automatically create a [Composition \(CML\) file](#) that defines an EDL—the set of clips you’ve added from media registered in catalogs, which you submit to a [Post Producer](#) publishing workflow with a Conform action. The Conform action processes the composition, stitching the clips and renders a single media file as output, based on the specifications in the CML.

The Create CML from Catalogs configuration is supported only in the Workflow Portal Windows client.

While the EDL Portal requires that all clips have the same frame rate, frame size and video codec; the CML Portal does not have this restriction. CML processing by Conform also improves VANC and caption processing.

The operator can review and edit label-based and embedded metadata for the selected media, and also update variables as required for the workflow. The job creates a new

binder from assets in or more source binders and updates it during execution; it may or may not be registered by the workflow into a catalog for further utilization.

Create DPP from Catalogs Configuration

The purpose of the DPP Portal is to enable operators to assemble and produce media files that conform to the current DPP standard, for broadcast in the UK market.

The Create DPP from Catalogs configuration is supported only in the Workflow Portal Windows client.

You use a DPP Portal to browse catalogs and select [binders](#) from completed ingest workflows jobs, enter metadata and mark programme parts, then submit it to a publishing workflow to generate DPP-compliant media which comprises the programme. A DPP configuration defines each field of DPP metadata in the programme, may be given a default value, and may be marked as read-only. In addition, the portal may be configured for either SD or HD.

The job creates a new binder from assets in or more source binders and updates it during execution; it may or may not be registered by the workflow into a catalog for further utilization.

Create VOD from Catalogs Configuration

The VOD Portal is designed to enable operators to prepare VOD assets, including digital ad insertion, metadata, captioning, ratings, branding, and copy protection, and submit them to a publishing workflow that encodes VOD assets and deliver them to multi-channel video programming distributors (MVPDs).

The Create VOD from Catalogs configuration is supported only in the Workflow Portal Windows client.

You use a VOD Portal to browse catalogs and select [binders](#) from completed ingest workflows jobs, enter metadata and mark programme parts, then generate CableLabs-compliant media. The operator can review and edit label-based and embedded metadata for the selected media, and also update variables as required for the workflow. The job creates a new binder from assets in or more source binders and updates it during execution; it may or may not be registered by the workflow into a catalog for further utilization.

Re-time Assets from Catalogs Configuration

Use Tempo Portal to browse catalogs and select source media that you want to re-time, create and mark clips to include or exclude from re-timing, and specify how much time expansion or compression to apply.

The Re-time Assets from Catalogs configuration (commonly called the Tempo configuration) is supported only in the Workflow Portal Windows client.

When configuration of re-timing is complete, the Portal generates a composition to describe that processing. The operator selects a Tempo workflow to process the CML, and the Tempo action in the workflow implements the re-timing of the media file. The

job creates a new binder from assets in or more source binders and updates it during execution; it may or may not be registered by the workflow into a catalog for further utilization.

Syndication Configuration

Use the Syndication Portal to browse catalogs and select syndicated source media that you want to review, update, and submit for processing in TrafficManager for broadcast.

The Syndication configuration is supported only in the Workflow Portal Windows client.

The Syndication Portal displays the selected media in a segmented view, based on the timing information obtained from the original syndication source (for example, PitchBlue).

When your review of segments and their attributes is complete, in Segmenting and Stitching modes, the Portal generates a new mezzanine metadata XML file as well as a composition (CML) file. The operator selects a publishing workflow to process either the mezzanine metadata file or the CML file for broadcast.

When using Pass-Thru mode, the Syndication Portal does not generate a CML. In Pass-through mode, the Portal generates an XML (similar to the other modes), but in addition passes the source media from the ingest workflow—which must be nicknamed *Original*—to the publishing workflow, so that the program can be transcoded without having to change the program's timeline.

Implementing Workflow Portal-based Media Processing

Implementing Vantage workflows that are intended for use with Workflow Portal requires planning and coordination by your Vantage administrator and workflow designer. To implement a Workflow Portal-based workflow, a Vantage domain administrator must first use the Vantage Management Console to do the following:

- Enable the utilization of Workflow Portal.
- Configure one or more *Workflow Portal configurations*, which define the Workflow Portal feature set for the specific application, including the components, features, and resources available to operators. This includes metadata and variables, and must be coordinated with the workflow designer to utilize the metadata and variables as appropriate for your application.

Note: Administrators who are responsible for creating Workflow Portal configurations should refer to the *Vantage Domain Management Guide* for details.

Workflow designers use Workflow Designer to create and configure the required workflows, including required metadata and variables, and activate them when you want to use them in testing or production.

Typically, a given media processing application involves at least 2 Vantage workflows:

- An *ingest* workflow, which transcodes media as required and registers it in a catalog

- A *publishing* workflow, which processes the media the operator has selected and forwarded to the workflow to encode it for publication.

Workflow Design Guidelines

This topic is for those who are designing and implementing workflows. It provides general guidelines for creating workflows intended for use in Workflow Portal applications.

Note: In addition to these general guidelines, there may be application-specific guidelines that must also be followed. These guidelines are noted in their respective topics in [Using Workflow Portal Configurations](#) for basic configurations; for product-specific guidelines, see the Tempo User Guide or the VOD Portal User Guide.

While you can use a single workflow to produce and distribute media, there are some media processing applications which require operator intervention using Workflow Portal, thus dividing the media processing into multiple workflows. Operator intervention tasks include QA, building clip lists, and for adding/editing metadata and variables prior to job submission for further processing.

Workflows for use in conjunction with Workflow Portal typically fall into two categories: ingest and publishing.

For example, an *ingest* workflow can automatically analyze source media and detect media attributes and characteristics such as frame rate, dimensions, letterboxing, and macroblocking. Ingest workflows often encode media into the required format for use in the publishing workflow. You typically use [Register actions](#) in the ingest workflow, to create [binders](#) in Vantage [catalogs](#), which operators will browse for files to process.

Ingest workflows can also produce proxy media that you can view with the Workflow Portal media player to evaluate quality issues and quickly define timecodes for trim points or commercial insertion, for example.

A *publishing* workflow is a workflow designed to process media submitted by Workflow Portal operators. Publishing workflows always start with a [Receive action](#) so that operators can submit jobs to them (and they must be running). When your application calls for an ingest workflow, you use Workflow Portal to evaluate the ingest workflow results, take any action required, and then submit the [job](#) to a publishing workflow. Frequently, a given application has more than one publishing workflow.

You can also chain publishing workflows, providing operator intervention at more than one point in the process.

You might use Workflow Portal in a Browse Windows Network configuration, where your process may not require an ingest workflow. You can use Workflow Portal to select media, edit metadata and variables and submit jobs to a publishing workflow, rather than just placing media files in a watch file for automated processing. The advantage to operator submission is that you can set metadata and variables during submission, providing more control over publishing workflow processing.

These topics provide guidelines for creating workflows for use with Workflow Portal:

- [Ingest Workflow Guidelines](#)
- [Publishing Workflow Guidelines](#)

Ingest Workflow Guidelines

When you use any Workflow Portal configuration other than Browse Windows Network, an ingest workflow, you must use an ingest workflow with a [Register action](#) (which should be located after all transcoding, and any metadata and variable modifications in the workflow), to create a [binder](#) in a [catalog](#). One binder is created for each [job](#) that executes. In addition to referencing each file ingested or created in the workflow, metadata labels which you specify are stored in the binder, along with variables.

You can use the special nicknames *Vantage EDL*, *Vantage Proxy*, and *Vantage Thumbnail* in Workflow Portal ingest workflows Flip action for identifying specific-purpose files:

- *Vantage EDL*—in the Program Stream and Transport Stream encoders, for EDL configurations.
- *Vantage Proxy*—in the QuickTime and MP4 encoders, for all configurations which create clip lists and/or utilize the media player to scrub media
- *Vantage Thumbnail*—in the Keyframe encoder for configurations where you can browse catalogs.

When you browse catalogs in Workflow Portal, you can view binders created by each job, giving you access to all resources defined in the binder, including the source media.

When building ingest workflows, observe the following general guidelines:

- *Register Action Requirements*—to make a binder available to Workflow Portal operators in any catalog-enabled configuration, use a Register action to save the binder in the appropriate catalog.
- *Workflow Portal Windows Client Media Player Requirements*—Use the Flip action to create a proxy file, using the nickname *Vantage Proxy*. Required format:
 - QuickTime encoder, H.264 video codec, AAC audio codec, QuickTime 7.6.9 installed
 - OR
 - MP4 encoder, x264 video codec, AAC audio codec, QuickTime 7.7.6 installed
- Make sure that your encoded proxy file is the same frame rate and timecode notation as your production media. Configure container settings to generate a timecode track to support the Use Clip Start Time feature. You can also burn in the timecode to make sure it is present.
- *Workflow Portal Web Client Media Player Requirements*—Use the Flip action to create a proxy for previewing in the HTML5 media viewer. The required format is:

Encoder: MP4 Encoder

Video Codec: x264

Audio Codec: AAC

Container: MP4 File

Make sure that your encoded proxy file is the same frame rate and timecode notation as your production media.

- *Proxy Viewing*—to enable a selected binder’s media file to automatically display in the Workflow Portal media viewer, assign the *Vantage Proxy* file [nickname](#) to the media file.
- *Catalog Viewing*—To support operator viewing of binders by thumbnail (instead of by name), configure a Flip action with the Keyframes encoder to create a thumbnail that uses the *Vantage Thumbnail* file nickname.
- *Metadata and Variables*—To make media information available to operators for verification or editing, configure an Analysis action (or a Workorder action for submitting multiple jobs at one time, with metadata) to collect the information in variables. Use a metadata label to store this information in a binder to pass the values to another workflow indirectly. For example, an operator submits a job to a publishing workflow in Workflow Portal.

Publishing Workflow Guidelines

Unlike ingest workflows, publishing workflows can be designed and configured in almost any way you require. Few limits are imposed on the design of a publishing workflow that is used by Workflow Portal.

When you configure publishing workflows, follow these guidelines:

- The publishing workflow must start with a [Receive action](#) so that an operator can submit media to it for processing.
- The publishing workflow should be configured to accept and process any metadata labels and variables that an operator enters, or that pass through from the ingest workflow jobs.
- Choose the type of transcoding action required to produce the output media you want and the Workflow Portal configuration you’re using. For example, an EDL Portal job requires a Flip action, while a CML Portal configuration requires a Conform action.

There may be additional requirements for various configurations. See the respective configuration topic in [Using Workflow Portal Configurations](#) or the app note or guide on the topic.

Starting a Workflow Portal Session

The following topics describe how to start sessions with the Workflow Portal clients, and how to load a different configuration:

- [Starting a Session with the Windows Client](#)
- [Starting a Session with the Web Client](#)

Starting a Session with the Windows Client

To start a session with the Workflow Portal Windows client, do the following:

1. Start the Windows client as described in [Starting Workflow Portal](#).
2. If you are prompted to select a [Vantage domain](#), select a domain as described in [Selecting the Vantage Domain](#).
If you do not know the Vantage domain name, contact your Vantage domain administrator.
3. If you are prompted to enter a Vantage user name, log in as described in [Changing Vantage Users in Windows Client Programs](#).
If you do not know your Vantage user log in information, contact your Vantage domain administrator.
4. If you are prompted to select a Workflow Portal configuration, select the configuration you want to use for this session.

To change the Workflow Portal configuration, see [Changing or Reloading a Configuration](#).

Starting a Session with the Web Client

To start a session with the Workflow Portal web client, do the following:

1. Start the web client as described in [Starting & Stopping Vantage Web Applications](#).
2. If you are prompted to select a [Vantage domain](#), select a domain as described in [Logging In or Changing Domains from Web Applications](#).
If you do not know the Vantage domain name, contact your Vantage domain administrator.
3. If you are prompted to enter a Vantage user name, log in as described in [Changing Vantage Users in Web Applications](#).
If you do not know your Vantage user log in information, contact your Vantage domain administrator.
4. If you are prompted to select a Workflow Portal configuration, select the configuration you want to use for this session.

To change the Workflow Portal configuration, see [Changing or Reloading a Configuration](#), below.

Changing or Reloading a Configuration

You can change Workflow Portal configurations while you are running Workflow Portal.

If a Vantage domain administrator updates a Workflow Portal configuration while you are using it, the program continues to use the configuration as it was when you selected it. To obtain the updated version, reload it when advised by the administrator.

- [Changing/Reloading a Configuration in the Windows Client](#)
- [Changing/Reloading a Configuration in the Web Client](#)

Changing/Reloading a Configuration in the Windows Client

To change or reload a configuration in the *Windows client*, do the following:

1. Select File > Change/Reload Application Configuration.
2. When the Select Configuration dialog appears, select a configuration to use and click OK.

Changing/Reloading a Configuration in the Web Client

To change or reload a configuration in the *web client*, do the following:

1. Select Portals.
2. Select the configuration to which you want to change.
3. When the confirmation dialog appears, click OK.

Managing Workflow Portal Projects

In any Workflow Portal configuration in the Windows client, you can select media and set up a job (with clips, metadata, variables, etc.) and submit it, then start over with new media for the next job, etc. You can also start working on a new job, and then save it, and open it later to complete the work and submit it for processing.

In Workflow Portal, the collective settings are referred to as a project. Using projects in Workflow Portal is similar to opening and working on files in Microsoft Word or Excel. You can create, edit, save, and re-open them any time you want.

Note: Projects are only valid for the domain they are created in and the Workflow Portal configuration they were saved from. You can not save projects from one domain and re-open the project for use in another domain. You also can not re-open a project if the configuration from which it was saved has been deleted from the domain.

- [Creating a New Project](#)
- [Saving a Project](#)
- [Saving a Project With Another Name](#)
- [Opening a Project](#)

Creating a New Project

To create a new project in Workflow Portal, select File > New Project.

Creating a new project is just like opening Workflow Portal and starting work. No media has been selected, no clips (if enabled) have been created or configured, and no metadata or variables have been modified. Everything is reset.

Creating a new project is handy if you are working continuously on selecting media and preparing it for submission to a workflow, then getting ready to select new media and starting another job: It clears out everything so you can start over again.

You can also create a new project when you have made an error that's not easy to fix, or you just want to start over with a clean slate.

You don't have to create a new project just because you may want to save it later.

Saving a Project

To save work you are performing on a given set of media, select File > Save Project.

When you save a project, Workflow Portal displays a File Save dialog. You can name the XML file anything you want, and save it where ever you want.

Note: Unlike other Vantage resources—workflows, Workflow Portal configurations, variables, etc. which are all stored in the Vantage domain's database—Workflow Portal

projects are stored as XML files in a Windows directory of your choosing, just like any other program's data files.

Each time you save the project after the first time, it just updates the project file.

You can re-open it later using the Open Project command.

Saving a Project With Another Name

To save a project you have open under another name, select File > Save Project As. Workflow Portal displays a File Save dialog. You can rename the XML file anything you want, and save it where ever you want.

You can re-open it later using the Open Project command.

Opening a Project

To open a project that has been previously saved, select File > Open Project. Workflow Portal displays the Open File dialog. Navigate to the file and click Open.

Performing Workflow Portal Tasks

The following topics describe how to use the components that comprise Workflow Portal, to perform these basic tasks:

- [Browsing Catalogs for Media](#)
- [Selecting a Binder](#)
- [Previewing Proxy Media in the Media Player](#)
- [Creating Clip Lists/Segments \(EDLs\)](#)
- [Editing Metadata Labels](#)
- [Specifying Variable Values](#)
- [Specifying Publishing Workflows](#)
- [Submitting Jobs in the Windows Client](#)
- [Submitting Jobs in the Web Client](#)

Browsing Catalogs for Media

You can browse catalogs and select media in [binders](#) in all configurations except Browse Windows Network configurations.

Note: The binder list doesn't automatically update when binders are added or deleted as workflow jobs execute. To update the list, click the Refresh button at the top of the Binder table.

Depending on your configuration, you may be able to perform the following:

- Browse and select binders from multiple catalogs
- Select specific media in a binder for submission
- View the list of media in a selected binder
- Manually delete binders

Selecting a Binder

To select a binder, do the following:

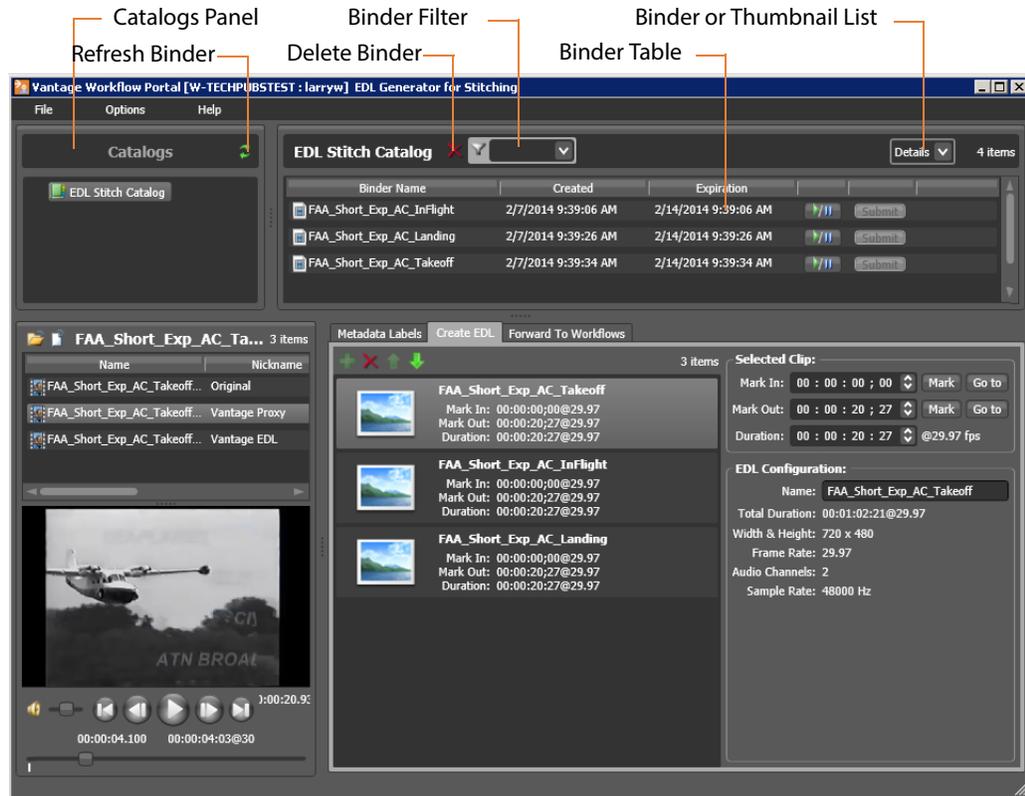
1. If the Catalogs panel (in the top left corner of the window) displays, select the catalog or catalog folder you want to browse.

Note: The catalogs that you can access are specified in the configuration. The catalog browser may be hidden, when the configuration only allows access to one catalog, with no subfolders.

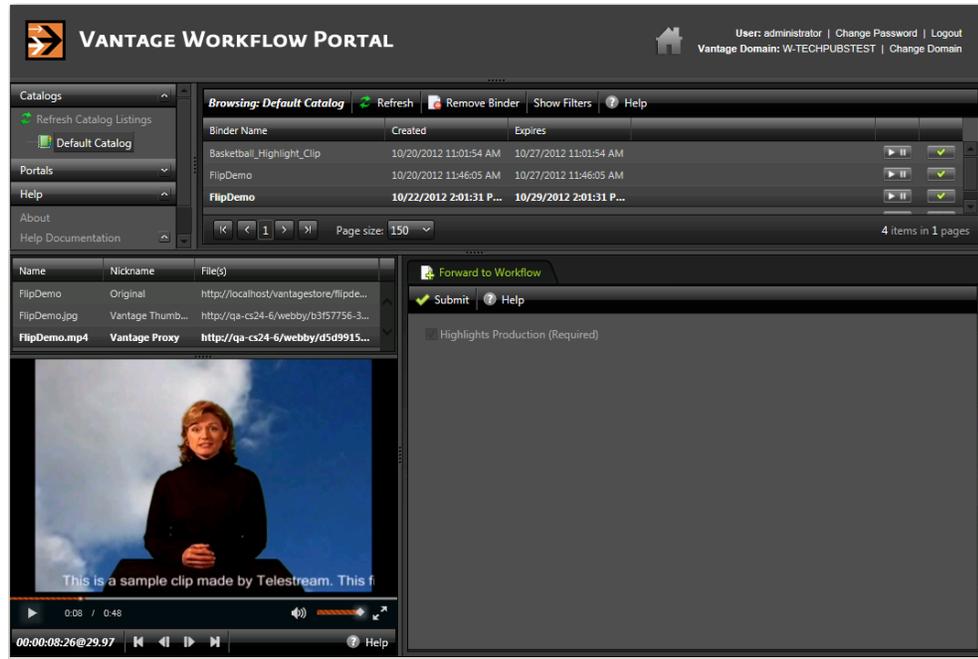
2. In the Binder table (directly above the tabbed workspace—upper right—displays the name of the catalog you are browsing), select the binder that you want to view.

In the Windows client (see below), use the Filter menu, located directly above the Binder Details panel, to help you filter binders. Use the Details menu (far right) to select Details or Thumbnails view.

The columns that display in this table are controlled by the configuration, and may include Binder Name, Created, Expiration, and the Play button and Submit button, and others.



In the web client (see below), use the Filter menu (directly above the Binder Details panel) to help you filter binders. To return to an unfiltered list and display all binders, click the Filter icon again.



1. Select a binder. When a binder is selected, Workflow Portal display its contents in the Binder Details panel directly below the Catalogs panel.

Using Binder Table Controls

The Binder table supports the following features:

Filtering

Type text in the Filter field or select a previously-entered string from the menu to filter the binders in the currently-selected catalog. Delete the text to display all binders in the catalog.

Sorting and Re-arranging Columns

Click on any column heading to sort the binder list, and click repeatedly to toggle the sort by ascending or descending order. Drag column headings to re-arrange the order.

Playing/Pausing Video

If enabled in the configuration, you can click the Play/Pause button in a binder row to preview the media. Click Repeatedly to play or pause the video.

Submitting a Binder

If enabled in the configuration, you can click the Submit button to display the Submit Jobs window.

Details/Thumbnails View

Select Details or Thumbnails from the menu.

Previewing Proxy Media in the Media Player

When you select a binder, Workflow Portal displays any file nicknamed *Vantage Proxy* in the media player, provided that it is encoded in a supported format. The binder contents may or may not display (above the media player), depending on the configuration.

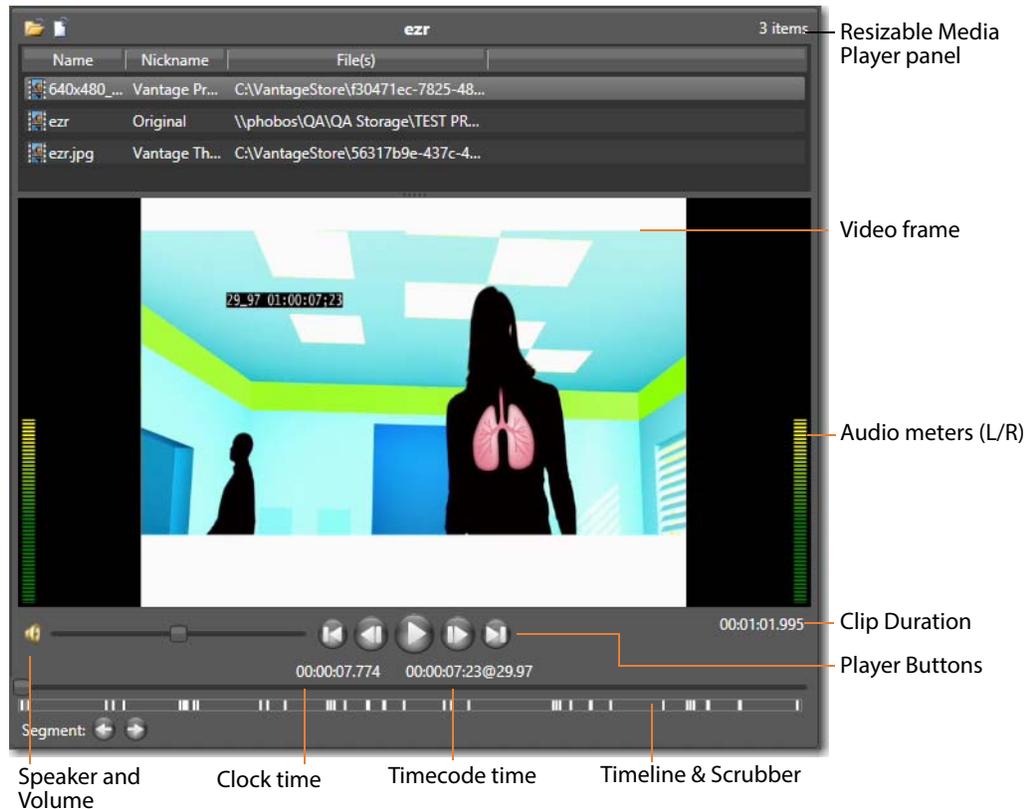
Note: Some configurations allow you to select one or more media files, and in addition, create clip lists consisting of temporal segments within the media. This topic discusses the functionality of the media player, whether your configuration supports clips lists or not.

The following topics describe how to preview media:

- [Previewing Proxy Media in the Windows Client](#)
- [Previewing Proxy Media in the Web Client](#)
- [Previewing Non-proxy Media](#)

Previewing Proxy Media in the Windows Client

When you preview proxy files in the Windows client, you are using the QuickTime Player. If you don't have QuickTime Player installed, download and install the player on your Workflow Portal workstation before you can preview these MOV files.



When you select a binder, Workflow Portal displays any video file nicknamed *Vantage Proxy*, if present. You can use the window, keyboard, and mouse controls listed [Window, Keyboard, and Mouse Controls](#) to control playback. You can also preview other supported media in the binder.

Encoding Requirements

- You should create a proxy file or for previewing/clipping in the Windows client version of Workflow Portal. Use one of these formats for the proxy:
 - For QuickTime 7.6.9: QuickTime encoder, H.264 video codec, AAC audio codec
 - OR
 - For QuickTime 7.7.6: MP4 encoder, x264 video codec, AAC audio codec.

Use the Flip action configured with the QuickTime encoder and configure the container settings to generate a timecode track. Make sure that your encoded proxy file is the same frame rate and timecode notation as your production media. Assign the nickname *Vantage Proxy*, so that the media player automatically loads and displays your proxy.

Telestream suggests that SD proxies (4:3) be set to a 640 x 480 frame size. For HD proxies (16:9), Telestream suggests a 640 x 360 frame size.

Basic Media Player Features

The Media Player panel displays the video in the viewing panel, in the proper aspect ratio. Media Player panel is resizable horizontally and vertically; the media frame displays the proper aspect ratio in the available space.

You can play sound or mute it, by clicking the speaker icon just to the left of the volume adjustment bar.

Audio meters display on the left and right, representing left and right channel stereo. When the video is playing (even when sound is muted) or as you scrub the media, the meters provide a visual clue representation of sound volume. The audio meters are designed to visually show the points of silence near where the operator is creating a new segment. In Tempo configurations for example, Tempo operators can choose points of silence to create a new segment, to avoid audio anomalies during the re-timing process.

The timeline at the bottom enables you to scrub the media; and the player buttons enable you to play, stop, or go to points in the media in forward and reverse.

Mark In tick marks display on the timeline to indicate clips (segments) in the clip list. (In Tempo only, overlapping segments are highlighted in red to indicate that overlaps are not allowed.)

Three timecodes display: HH:MM:SS.SSS time, HH:MM:SS:FF@FPS timecode at the bottom center; and a duration, HH:MM:SS.SSS time format.

Window, Keyboard, and Mouse Controls

The Windows client window, keyboard, and mouse controls are listed in [Window, Keyboard, and Mouse Controls](#).

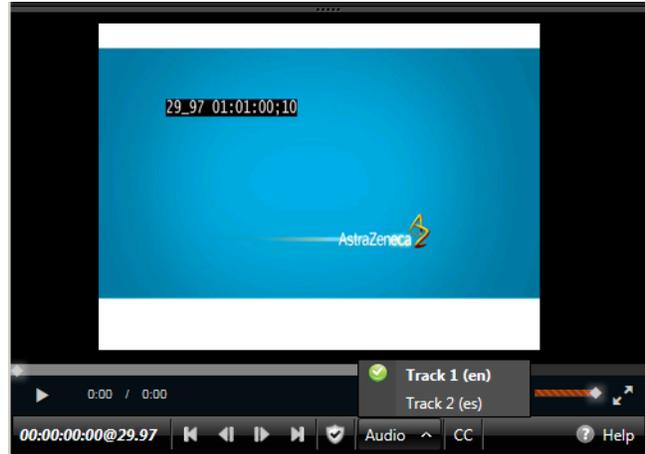
Note: Clicking in the playback controls area, or on the video focuses the preview player controls (indicated by the blue focus border). Focusing this area is necessary for the “JKL” controls, and also allows you to use the Ctrl hot keys without pressing Ctrl.

Function	Controls
Play/Pause/Reverse	<p><i>Ctrl+P</i> or <i>Ctrl+Space</i></p> <p><i>J</i> (Reverse play—repeat for -1.5x, -2x, -5x, -8x)</p> <p><i>K</i> (Pause)</p> <p><i>L</i> (Play—repeat for 1.5x, 2x, 5x, 8x)</p> <p><i>JK simultaneously</i> (Reverse play slow motion -1/8x; repeat for -1/4x, -1/2x)</p> <p><i>KL simultaneously</i> (Forward play slow motion 1/8x; repeat for 1/4x, 1/2x)</p>
Stop	<i>Ctrl+S</i>
Forward Frame	<p><i>Ctrl+F</i></p> <p><i>Ctrl + Mouse Wheel</i>, one frame per wheel click</p> <p><i>K held down + L</i> (Forward bump one frame)</p> <p><i>L held down with K already pressed</i> (Forward bump repeat 1/4 speed)</p> <p><i>Left Arrow</i> (Reverse bump one frame)</p> <p><i>Right Arrow</i> (Forward bump one frame)</p>
Forward/Reverse 10 Frames	<p><i>Up Arrow</i> (Forward bump 10 frames)</p> <p><i>Down Arrow</i> (Reverse bump 10 frames)</p>
Forward/Reverse One Second	<i>Mouse Wheel (no modifier keys)</i> —one second per wheel click
Forward/Reverse One Minute	<i>Shift + Mouse Wheel</i> —one minute per wheel click
Forward/Reverse One Hour	<i>Ctrl + Shift + Mouse Wheel</i> —one hour per wheel click
Reverse Frame	<p><i>Ctrl+B</i></p> <p><i>Ctrl + Mouse Wheel</i>, one frame per wheel click</p> <p><i>K held down + J</i> (Reverse bump one frame)</p> <p><i>J held down with K already pressed</i> (Reverse bump repeat 1/4 speed)</p>
Mark In	<i>Ctrl+I</i> or <i>Ctrl+E</i> (In points are indicated by tick marks on the timeline.)
Mark Out	<i>Ctrl+O</i> or <i>Ctrl+R</i>
Go to mark in frame	<i>Ctrl+Q</i>

Function	Controls
Go to mark out frame	<i>Ctrl+W</i>
Go to start	<i>Ctrl+Home</i>
Go to end	<i>Ctrl+End</i>
Audio Mute (toggle)	<i>Ctrl+M</i>
Adjust Volume	<i>Drag volume button right or left to adjust volume.</i>
Scroll media	<i>Drag media button right or left to scrub (scroll) media.</i>
Duplicate selected clip	<i>Ctrl+T</i> (Selects the new clip and sets its mark in to the original clip's mark out, if appropriate)
Jump to next segment	<i>Alt+Left Right Arrow</i> Jumps to the next or previous segment, as noted by the white bars on the scrubber bar. Works even when segment markers are not displayed.
Jump to next scene change marker	<i>Shift-Alt+Left Right Arrow</i> Jumps to the next or previous scene change marker, as noted by the green bars on the scrubber bar. Works even when scene change markers are not displayed.

Previewing Proxy Media in the Web Client

When you view proxy files in the Workflow Portal web client, you are utilizing the native HTML5 Video Player in the web browser.



Note: The appearance of captions in the proxy may vary, depending on the browser you're using. Try supported browsers to find one that best suits your needs. When playing to the end of a proxy in Chrome versions 35 and 36, Telestream has observed that the media player may display an incorrect duration as a result of a round-up error. This anomaly is cosmetic. If you set this frame as a mark-out point, the correct timecode is entered by Workflow Portal.

Use the Flip action to produce an MP4 proxy file for previewing in the Workflow Portal web client's HTML5 media viewer, using these settings:

- Encoder: MP4 Encoder
- Video Codec: x264
- Audio Codec: AAC
- Container: MP4 File

Make sure that your encoded proxy file is the same frame rate and timecode notation as your production media. Always use the *Vantage Proxy nickname* for the proxy file, so that the file automatically displays in the media player when you select a binder.

Telestream suggests that you generate SD proxies (4:3) at 640 x 480 frame size. For HD proxies (16:9), generate them at 640 x 360 frame size.

Note: You can right-click on the video to display a context menu with many player commands as an alternative to using the player controls or keyboard shortcuts. The available controls vary with the browser.

To view a proxy, select a binder and use the controls in [Web Workflow Portal Keyboard Controls](#) to control playback.

Previewing WebVTT Caption Files

Vantage can process media containing closed captions and produce a proxy media file and an accompanying WebVTT caption file. The proxy can be previewed with WebVTT captions using the HTML5 media player in Internet Explorer.

Note: Only Internet Explorer supports this playback feature.

To create a proxy with WebVTT captions, follow these requirements in an ingest transcoding workflow:

- Use an [Analyze action](#), with *Ancillary Data Detection > Publish Metadata > Generate WebVTT Attachment* implemented to create a WebVTT file. It must be nicknamed *Vantage Caption Source*. The file will be saved in a Vantage store.

Note: An HTTP alias must be set up for the web portal. See [Web Application Browser Requirements](#).

- Use a Flip action to transcode the file using the MP4 x264 encoder with closed captions enabled.
- Use a Register action to add the job (for accessing the proxy and the WebVTT files) in a catalog.
- Display the proxy with captions in the Workflow Portal web applications' media player. Be sure to set the player caption control in the gear menu to enable Closed Captions.

Listening to Individual Audio Tracks

To listen to individual audio tracks in a proxy file using the web version of Workflow Portal, enable multiple audio streams in the Flip action (encoding MP4) that produces the *Vantage Proxy* nicknamed proxy file in the ingest workflow.

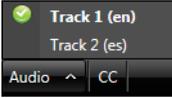
Note: Only Internet Explorer supports this playback feature.

Web Workflow Portal Keyboard Controls

The keyboard controls are dependent on the web browser (and the version) that you use. Most browsers provide fast forward, and some—such as Internet Explorer—provide reverse as well. Workflow Portal's playback rates aren't generally implemented in every step—usually only x2 and x8 are supported.

Note: The HTML5 Video Viewer must be in focus (you must click in the video frame) in order to use the player controls and keyboard shortcuts.

Function	Controls
<p>Play</p> <p><i>Enabled in play mode (click Play button or press K key).</i></p>	<p>  (appears in binder list)</p> <p>Press L x 1—play 1x speed (normal). Press L x 2—play 2x speed. Press L x 3—play 3x speed. Press L x 4—play 5x speed. Press L x 5—play 8x speed.</p> <p>(IE only) Tap the + (plus) key to accelerate the clip’s play speed to the next level. Press the - (minus) key to decelerate the clip’s play speed down the next level.</p>
<p>Reverse Play</p> <p><i>Enabled in play mode (click Play button or press K key).</i></p>	<p></p> <p>Press J x—reverse play. Press J x 2—reverse play 2x speed. Press J x 3—reverse play 3x speed. Press J x 4—reverse play 5x speed. Press J x 5—reverse play 8x speed.</p> <p>(IE only) Press the + (plus) key to accelerate the clip’s play speed up to the next level. Press the - (minus) key to decelerate the clip’s play speed down the next level.</p>
<p>Play/Pause</p>	<p></p> <p>Press K—play forward or pause. Hold K down to step in reverse.</p>
<p>Forward Frames</p>	<p></p> <p>Press L—step forward one frame.</p> <p>(IE only) Press the Right Arrow key—move forward 10 frames.</p> <p>(Chrome and IE 11) Press the Right Arrow key—move forward 1 frame. Press the Up Arrow key to move forward 10 frames.</p> <p>The arrow keys on the numbers keypad function in the same manner.</p>
<p>Reverse Frames</p>	<p></p> <p>Tap J—move reverse one frame.</p> <p>(IE only) Press the Left Arrow key—move reverse 10 frames.</p> <p>(Chrome and IE 11) Press the Left Arrow key—move reverse 1 frame. Press the Down Arrow key to move reverse 10 frames.</p> <p>The arrow keys on the numbers keypad function in the same manner.</p>

Function	Controls
Go to start	 (IE only) Press the Home key.
Go to end	 (IE only) Press the End key.
Mute audio	 (IE only) Press the M key during play. Press again to unmute.
Scroll media	
Full screen mode	 Press this button to expand to full screen mode.
Zoom mode	(IE 11 only) Press Z to zoom in. Press Z again to zoom back out.
Video-safe overlay	 Click to display/hide the video safe overlay frame, for SD and HD proxies.
Closed captioning	 Click to display closed captions, when provided by browser.
Audio track menu	 When multiple audio tracks are present, the Audio menu displays. Click to select the track you want to hear. (IE only).

Previewing Non-proxy Media

Note: This feature is only supported in the Windows client and only when the binder detail display is enabled in the configuration.

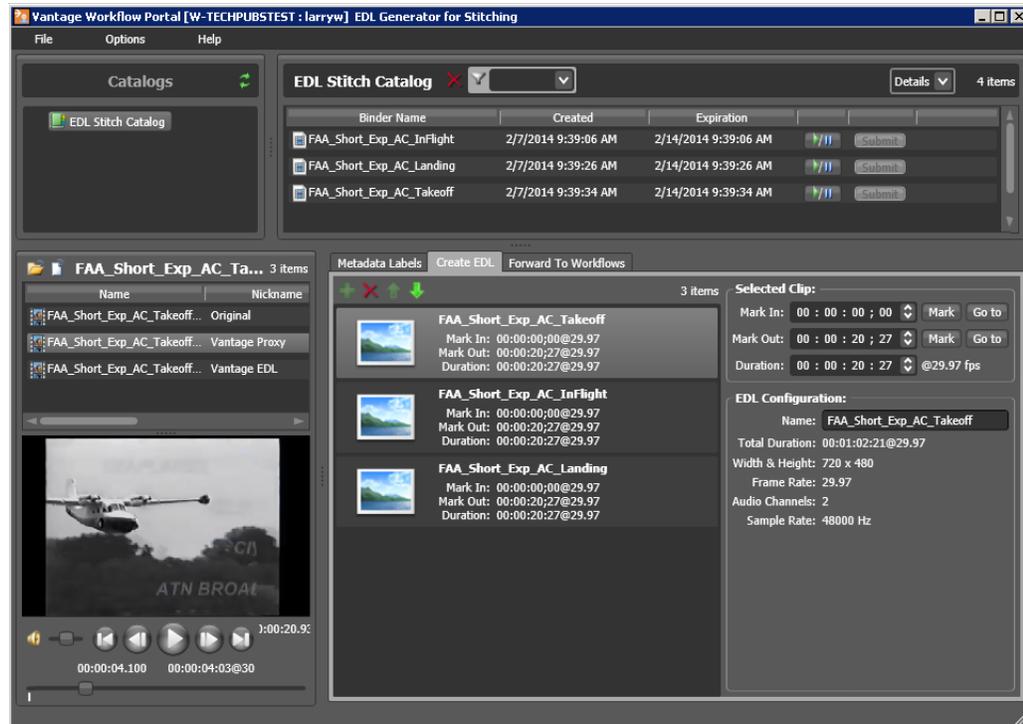
Media with a nickname other than *Vantage Proxy* may be played under certain conditions. Select the media in the binder list (directly above the media player) and try these methods:

1. For QuickTime (.mov) files, select the file and use the media player controls to play the media file.
2. To play a QuickTime file outside the embedded media player, right-click the media and select Open With Default Program or click the file icon directly above the binder list to play the media file in the default program for MOV files.
3. If you don't have a default program assigned to handle MOV files, right-click the media asset, and select Open Containing Folder or click the folder icon directly above the binder list. The Windows folder containing the media opens, so you can right-click the file and play it using Open With to select a suitable program.
4. For files other than QuickTime, right-click the media and select Open With Default Program or click the file icon directly above the binder list to play the media file in the default program for the specified suffix of the file.
5. If you don't have a default program assigned to play this file type, right-click the media asset, and select Open Containing Folder or click the folder icon directly above the binder list. The Windows folder containing the media opens, so you can right-click the file and play it using Open With to select a suitable program.

Creating Clip Lists/Segments (EDLs)

Note: Microsoft User Account Control, by default, prevents Windows programs (such as the Workflow Portal client program) from writing files in certain protected folders. If you receive an error message indicating that access to a particular Vantage store or folder is denied, contact your Vantage administrator. Solutions include changing the location of the store/folder or disabling UAC on computers running Vantage clients.

Configurations that support clip/segment lists (often called Edit Decision Lists—EDLs) displays a clip or segment management tab in the workspace (this workspace may differ, depending on how the configuration is set up):



To create a clip list, do the following:

1. Browse the binders in the selected catalog, and select a binder to display its proxy in the media player.
2. Display the clip management tab (may be named differently by configuration)—use the following topics to create and configure clips:
 - [Adding Clips](#)
 - [Evaluating Clip Metadata and Attributes](#)
 - [Editing Clip Start and End Times](#)
 - [Updating Segment Attributes in Syndication Configurations](#)
 - [Deleting Clips](#)
 - [Reordering Clips](#)

Adding Clips

You can add multiple clips to a list, and you can add the same clip multiple times.

Note: If you do not want to combine clips in one file, you can clip the same file multiple times. For example, if you are extracting multiple highlights from a single

media file, you can mark a highlight, select Submit, and then mark a new highlight without affecting the first one.

To add a clip to the list from the media in the selected binder, click the Add button .

Note: In an EDL configuration, the list must be comprised of media file clips that have the same frame size and frame rate. In a CML configuration, this is not a requirement. When you add the first clip to an EDL, the frame size and rate of the EDL are set to the metrics of that clip. Once the frame size and rate are set for an EDL, Workflow Portal does not allow you to add an incompatible clip. If you select a binder with a clip that is incompatible, the Add button is disabled to indicate that the clip cannot be added.

Each clip you add creates a tick mark on the timeline where the Mark In point is located.

Evaluating Clip Metadata and Attributes

When you select a clip, Workflow Portal displays the clip details to the right. The information may include the frame size and the frame rate, as well as other information about the selected clip, depending on the configuration.

Editing Clip Start and End Times

The default clip start and end times are the start and end times defined in the source media file. To trim the clip, edit the start and end times to define the clip you want.

To change the clip start time do any of the following:

- Use the media player to select the start time and frame, then click the Mark button for the Mark In time.
- Click in the Mark In time setting and press CTRL-M.
- Type time or frame values in the Mark In time setting. The displayed format is: HH:MM:SS;FF, where HH indicates hours, MM indicates minutes, SS indicates seconds, and FF indicates frames.
- In the Mark In time setting, click one of the numbers and use the up and down controls to change the value.

To change the clip end time do any of the following:

- Use the media player to select the end time and frame, then click the Mark button for the Mark Out time.
- Click in the Mark Out time setting and press CTRL-M.
- Type time or frame values in the Mark Out time setting. The displayed format is: HH:MM:SS;FF, where HH indicates hours, MM indicates minutes, SS indicates seconds, and FF indicates frames.
- In the Mark Out time setting, click one of the numbers and use the up and down controls to change the value.

- Adjust the duration timecode, which adjusts the mark out point relative to the mark in point. This field indicates the duration of the media between the mark in/out points of the currently selected clip.

If you specify a mark in, mark out, or duration timecode that makes one or more of the timecodes invalid, the affected timecodes display a red background. For example if you select a Mark In timecode that starts after the Mark Out timecode, the Mark In and Duration timecodes display red. Also, if the duration timecode moves the mark out timecode beyond the end of the clip timeline, both the Duration and Mark Out fields display red to indicate the error.

The duration timecode can be dropframe or non-dropframe, depending on the setting of the *Use dropframe notation for duration when appropriate* checkbox in the Vantage Management Console Workflow Portal Configurations panel. By default (unchecked), durations are always shown in non-dropframe. When checked, durations match the dropframe setting of the in/out values.

Updating Segment Attributes in Syndication Configurations

A selected segment displays its original ordinal position, along with its regrouped position when it has been re-ordered. It also displays the type of segment, which you can modify by selecting a new type from the list. You can also enter a description and check Not Included.

When a segment doesn't match the type or the Not Included template setting, the clip is marked with a badge to alert you of the inconsistency, which may indicate a problem.

You can also modify the base name of the output files (an updated mezzanine metadata file and a CML file), and create a new template using the current segment configuration.

Reordering Clips

To change the order of a clip in the list, click on the clip and click the up  and down  buttons to change the clip position.

Deleting Clips

To delete a clip from the list, click on the clip and click the Delete button .

Editing Metadata Labels

When the configuration permits it, you can view and update the metadata [labels](#) ingested, produced, updated, or passed through previous workflows in Workflow Portal.

Note: In a Forward Binder configuration, you edit metadata before submitting the binder to a publishing workflow. Changes are made in the binder you selected in the catalog. In a Copy Binder configuration, you click Submit and then enter metadata for

the new binder you are creating. Your edits do not affect the original binder you selected from the catalog—only the new, copied binder.

When you submit a binder, all metadata **labels** are included. If the configuration supports metadata entry and editing, you can modify metadata labels before you submit. All metadata labels are applied to all media files that are being submitted.

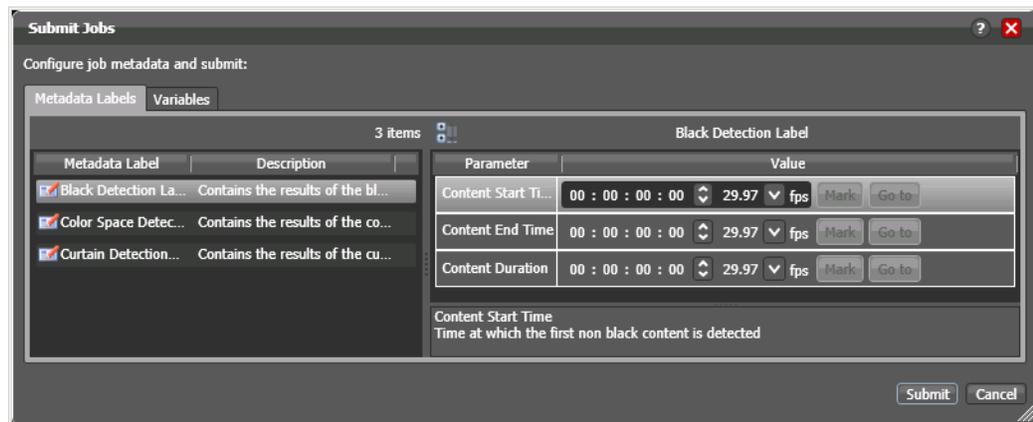
The following topics describe how to edit metadata labels:

- [Editing Metadata in the Windows Client](#)
- [Editing Metadata in the Web Client](#)

Editing Metadata in the Windows Client

If the configuration supports metadata editing, you can edit them as follows:

1. Display the Metadata Labels tab.



2. Select the label you want to edit in the Metadata Label list.
3. In the Parameter list to the right, edit the parameter values.
4. If the metadata label you want to configure does not display in the list and the configuration permits adding labels, click the new label button, select a label to add, and click OK.

Note: This option is not available when submitting files in a Browse Windows Network configuration.

Editing Timecode Values with Hot Keys

If hot keys are assigned to input, output, or duration parameters in this configuration, you can use them to set these values as you scrub the media in the player. Roll over the mark button to display the assigned hot key in the tool tip.

Editing Timecode Values in Trim Groups

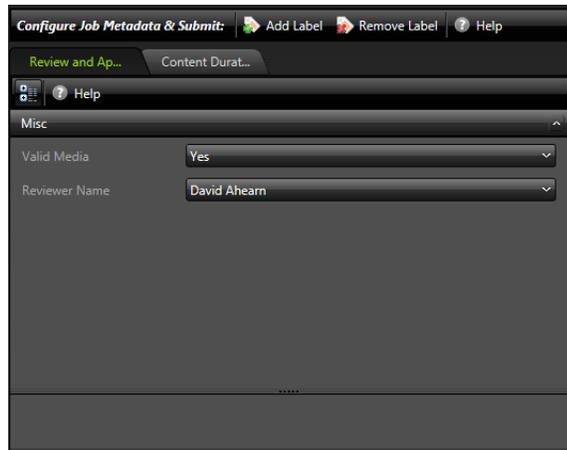
If trim groups are defined (a set of input, output, and duration parameters) in this configuration, the duration is automatically calculated. If you change the input value or output value, duration is automatically updated. If you change the duration value, the output value is automatically updated.

The duration timecode can be dropframe or non-dropframe, depending on the setting of the *Use dropframe notation for duration when appropriate* checkbox in the Vantage Management Console Workflow Portal Configurations panel. By default (unchecked), durations are always shown in non-dropframe. When checked, durations match the dropframe setting of the in/out values.

Editing Metadata in the Web Client

If the configuration supports metadata editing, you can configure them as follows:

1. Initiate submit mode as described in [Submitting Jobs in the Web Client](#).



2. To add a metadata label to configure, do the following:
 - a. Click Add Label.
 - b. Select a label to add from the Add Metadata Labels dialog.
 - c. Click Add.
3. To edit metadata label parameters, locate the tab for the label, select the tab, and configure the label parameters.
4. To remove a metadata label configuration, locate the tab for the label, select the tab, and click Remove Label.
5. Repeat metadata label selection and parameter configuration until all required metadata labels are configured.
6. If you need to configure variables, see [Specifying Variable Values](#).
7. When you are done preparing for submission, click Submit.

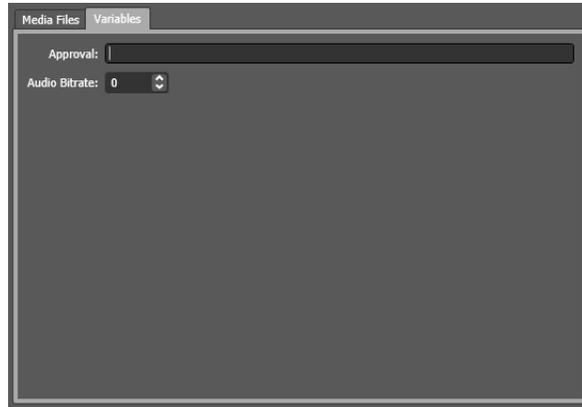
Specifying Variable Values

You can set up Workflow Portal configuration to enable you to review and edit/add variable values stored in a binder from a previous job, before you submit the media (and the variables) to a publishing workflow.

Note: In Forward Binder configurations, you can edit variables in the main window; in Copy Binder configurations, you can only edit variables *after* you click the Submit button, in the Submit Jobs window. For details, see [Browse Catalogs Copy Binder and Forward Binder Configurations](#).

Edit run-time variable values as follows:

Display the Variables tab on the main window or the Submit Jobs window (depending on the type of configuration), as shown below:

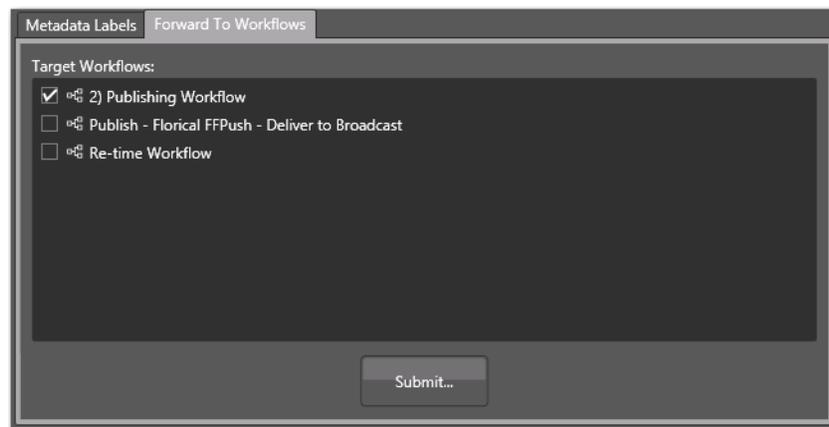


For each variable displayed, enter or update the run-time value as required.

Specifying Publishing Workflows

Depending on your configuration setup, you may or may not be able to specify which workflow to submit jobs to.

- One or more workflows have been set as required in the configuration, and they are displayed as checked and disabled.
- One or more workflows have been set as required in the configuration, but the workflows list is hidden.
- One or more workflows are displayed; you can check those that you want to process this job. If this is the case, the Forward to Workflows panel displays:



Check the workflows you want to submit this job to and click Submit. (These workflows must be activated in Workflow Designer, or your jobs will fail to run.)

Submitting Jobs in the Windows Client

When you click Submit, depending on the Workflow Portal configuration you are using, you may or may not have performed the following tasks at this point in the process:

- [Previewing Proxy Media in the Media Player](#)
- [Editing Metadata Labels](#)
- [Specifying Variable Values](#)
- [Specifying Publishing Workflows](#)

For each of these tasks which must be performed before you can submit the media to the publishing workflow for processing, the associated panel is displayed.

Click the link above to display the help topic for the task you are performing.

Submitting Jobs in the Web Client

When you initiate job submission in the web client, the Workflow Portal view changes from displaying media information to submitting information.

The Workflow Portal configuration may specify one or more required workflows, or you might be allowed to select one or more workflows from a list. Some of these options are limited to a particular configuration, and some of them can be disabled. The options that apply to your environment are defined by the Vantage domain administrator and the workflow designer.

If the selected configuration allows you to view the workflows to which you can submit, Workflow Portal displays a Forward to Workflow tab. If the configuration does not support operator viewing of workflows, Workflow Portal just displays a Submit button.

To initiate submit mode, do the following:

1. If the Workflow Portal window displays a Forward to Workflows tab, do the following:
 - a. Select the Forward to Workflow tab.
 - b. Check or clear each workflow checkbox to specify which publishing workflows should process the job.
 - c. Click Submit to enter submit mode.
2. If Workflow Portal does not display a Forward to Workflows tab, do one of the following to initiate submit mode:
 - Click the Submit button.
 - Click the submit button  to the right of the binder name in the binder list.If no other configuration options are available, the binder is submitted to the selected workflows.
3. If other configuration settings are available, Workflow Portal displays a dialog in which you can configure those options. For more information, refer to [Editing Metadata Labels](#) and [Specifying Variable Values](#).
4. When you are done preparing for submission, click Submit.

Windows Client Menus

This table describes the menu selections in the Workflow Portal Windows client.

Menu	Selection	Description
File	Change Vantage Domain	Enables you to log into another Vantage domain. See Selecting Vantage Domains and Logging In .
	Change Vantage User	Enables you to change Vantage users. See Changing Vantage Users in Windows Client Programs .
	Recent Domains	Lists the last few Vantage domains that were used in this client.
	Change/Reload Application Configuration	Enables you to select another configuration, or reload a configuration that has been modified to pick up the changes. See Changing or Reloading a Configuration .
	New Project	Resets the Workflow Portal configuration to a new state, clearing all media and data in all tabs. See Creating a New Project .
	Open Project	Opens a project that was previously saved so that you can continue working or submit a job. See Opening a Project .
	Save Project	Saves the project in its current state—media you've selected, and all data you've entered or set, for future use. See Saving a Project .
	Save Project As...	Saves the current project under another name, replicating the media and data and settings as another project. See Saving a Project With Another Name .
	Exit	Closes the Workflow Portal program.
Options	Restore Tips & Warnings	Restores the display of Workflow Portal tips and warnings after the feature has been disabled.
	Hide Tips & Warnings	Hides Workflow Portal tips and warnings.
	Prompt for Login Next Time Application is Launched	When checked, Workflow Portal requires login each time the program is launched, to increase security.

Menu	Selection	Description
	Use Clip Start Time	Toggle this feature. When a check displays, the preview window uses the start time defined in the proxy media. If no check displays, the start time begins at zero.
Help	Contents	Display a Windows help version of this guide.
	Index	Display the index of this guide.
	Search	Search for key words in this guide.
	Online Help	Display the Vantage guides available on the Telestream web site.
	About	Display the Workflow Portal version information.

Web Client Menus

This table describes the menu selections and title bar options in the web clients.

Menu	Selection	Description
Title bar options	Change Password	See Changing Passwords in Windows Client Programs .
	Logout	Log out the current Vantage user.
	Change Domain	See Selecting Vantage Domains and Logging In .
Catalogs menu	Refresh Catalog Listings	Click to refresh the display of catalogs.
Help menu	About	Select to display Workflow Portal product version information.
	Help Documentation	Click this entry to toggle the display of the submenu.
	User Guide	Click to display the PDF version of this guide in a separate browser window.
	Web Help	Click to display the HTML version of this guide in a separate browser window.

Troubleshooting Workflow Portal

Use the following topics to help you solve certain problems with Workflow Portal:

- [Opening Workflow Portal the First Time](#)
- [Difficulties Changing Configurations](#)
- [Problems Playing Proxy Files](#)
- [Configurations Don't Display in the Web Client](#)
- [No Session Licenses Available](#)

Opening Workflow Portal the First Time

When opening Workflow Portal for the first time, depending on the design of your network and the location of your client workstation and Vantage domain server, the Domain login dialog may not display your Vantage domain. If this is the case, you may be able to log in by using the name or IP address of the Vantage domain server. For more details, see [Selecting Vantage Domains and Logging In](#).

Difficulties Changing Configurations

When you change domains or configurations, you may also encounter these problems:

- No Configurations Available...
Workflow Portal displays this error when you log in to a domain where no Workflow Portal configurations are defined or where you do not have access to any of the defined configurations.
Contact your Vantage domain administrator.
- No session licenses available for this application...
Either the domain is not licensed for running Workflow Portal or all available Workflow Portal licenses are in use. Workflow Portal will operate in unlicensed/demo mode, but will not allow you to submit [jobs](#) or edit metadata labels until a Workflow Portal license becomes available.
Contact your Vantage domain administrator.

Note: An administrator can release a license in the Vantage Management Console.

- Problem communicating with [database](#)—could not find stored procedure Select-SessionsByExecution...
This error displays when Workflow Portal is attempting to display a list of configurations from the selected domain, but the version of the domain is not compatible with your client. Contact your Vantage domain administrator to upgrade the Workflow Portal program on your computer.

- The requested workflows are either not running or no longer exist...

This error displays when you submit an asset or media file to a workflow that has been deleted, or is not activated. Contact your Vantage domain administrator, who can activate the Vantage workflow or edit the configuration to correct the problem.

Problems Playing Proxy Files

If you can't play proxy files in a binder, review these issues:

- In the web client, the Wait cursor displays forever:
Your virtual directory may not be implemented in IIS
- The location path may not be specified correctly, or it may be using a letter drive where a UNC path is required for remote client/service access
- The alias to the directory may not be specified in the store
- The alias path may be incorrect.

It is valid to use a drive letter as part of a Virtual Directory. This imposes no restrictions other than requiring the Vantage store to be located on a drive attached to the web apps host (such as a local hard drive or more commonly a SAN).

- In Workflow Portal, make sure that you create a QuickTime H.264/AAC proxy for previewing media or creating clips. Use the QuickTime encoder, and configure the container settings to generate a timecode track. Make sure that your encoded proxy file is the same frame rate and timecode notation as your production media. Assign the nickname *Vantage Proxy*, so that the media player in Workflow Portal automatically loads and displays your proxy.
- Alternatively, the Workflow Portal Windows Client Media Player supports MP4 with x264-encoded H.264/AAC, provided that QuickTime 7.7.6 or later is installed on the computer running the Workflow Portal Windows client.
- For previewing media in the Workflow Portal web client's HTML5 media viewer, make sure the video is encoded using the Flip action (and nicknamed *Vantage Proxy*), with these settings:
Encoder: MP4 Encoder
Video Codec: x264
Audio Codec: AAC
Container: MP4 File
- When using the [Workflow Portal Web Application](#) on a Windows Server platform, you must install the Desktop Experience feature in order to view proxy media in the HTML5 Media Player.
- When playing to the end of a proxy in Chrome, versions 35 and 36, Telestream has observed that the media player may display an incorrect duration as a result of a round-up error. This anomaly is cosmetic. If you set this frame as a mark-out point, the correct timecode is entered by Workflow Portal.

Configurations Don't Display in the Web Client

You've created a new configuration, but you can't select it in the web Workflow Portal.

- Perhaps it is not a Copy Binder or Forward Binder configuration— the other types are not designed to function in the web client, only the Windows client.
- Perhaps you (your Vantage user) don't have permission to use it.

No Session Licenses Available

Workflow Portal displays this message when the number of active session licenses is equal to the number of authorized seats in your license, and no more are available.

Note: Open the Vantage Management console > Licenses and use the Licenses and Portal Sessions tabs to determine how many servers can run Workflow Portal concurrently, and how many sessions are currently active.

Identify the reason and resolution:

- The maximum number of operators are concurrently using Workflow Portal. Either increase the number of authorized servers (concurrent instances) or wait until someone closes Workflow Portal and releases a license. Open the Vantage Management Console > Licenses and display the Licenses tab to review your license.
- Workflow Portal has crashed one or more times, and the session is still active even though that instance of Workflow Portal is not. Open the Vantage Management Console > Licenses and display the Portal Sessions tab to verify each active session and the associated computer. If Workflow Portal is not running on that server, select and delete the session to release it.

Using Workflow Portal Configurations

This chapter describes how to operate each of the basic Workflow Portal configurations.

Workflow Portal configurations are created in the Vantage Management Console. The functionality options and user interface components are specific to each type of configuration and are enabled in Workflow Portal when it is launched.

A Vantage administrator can make as many of each type of configuration as necessary, each one configured to support a specific media processing application.

Configurations are developed in conjunction with a workflow designer, so that the configuration performs correctly with the associated ingest and publication workflows.

Once you've used a specific configuration, each time you launch Workflow Portal it uses it automatically.

Note: When you are using a given type of configuration—for example, a VOD configuration—it is common to think of and refer to Workflow Portal simply as the *VOD Portal*. When you read about a portal by any name (VOD, DPP, etc.), just remember—*this particular Portal is Workflow Portal using its respective configuration*.

The following topics describe each basic type of Workflow Portal configuration, and how to use it:

- [Using Browse Catalogs Copy Binder and Forward Binder Portals](#)
- [Using Windows Portals](#)
- [Using EDL Portals](#)
- [Using CML Portals](#)

The following topic provides an overview of the DPP Portal, offered as an optional, licensed configuration:

- [DPP Portal Overview](#)

VOD Portal is offered as part of VOD Producer DAI and Tempo Portal is offered as part of Tempo, both Telestream products built on the Vantage platform. The Syndication Portal is offered as part of TrafficManager. The following topics provide an overview of these Workflow Portal configurations.

- [VOD | DAI Portal Overview](#)
- [Tempo Portal Overview](#)
- [Syndication Portal Overview](#)

Note: These configurations are described in separate guides that accompany each product.

Using Browse Catalogs Copy Binder and Forward Binder Portals

Note: These configuration can be used in both the Workflow Portal Windows client and the Workflow Portal web app.

The Browse Catalogs configurations are the most broadly-focused operator-intervention configurations. In these configurations, the key requirement is the registration of media in a catalog using an ingest workflow. This enables an operator to select it and review a proxy, edit metadata and variable values as required, and submit it to one or more publishing workflows.

Browse Catalog configurations are not designed to solve any specific media processing application (such as DPP or CML); they simply enable operator-intervention processing of media registered in a Vantage catalog.

Note: Media trimming can be implemented in Workflow Portal in both Browse Catalog configurations. For example workflows, go to the Vantage Support page on the Telestream web site, and download the Workflow Examples zip file for your version of Vantage.

In a Browse Catalog *Copy Binder* Portal, the operator browses a [catalog](#) and selects a [binder](#) to prepare before submitting the job to a publishing workflow. A Copy Binder configuration automatically duplicates the original binder and submits the duplicated binder (with changes made by the operator) to the publishing workflow, leaving the original binder intact in the catalog for future use or re-submittal. (If you may ever need to use the *copied* binder later—in case of an error, for example—you should also use a Register action in the publication workflow to register the *new* binder in a catalog).

In order to have a binder to submit, the operator clicks the Submit button to trigger the duplication of the original binder. Now, using the copied binder as a template, the operator can edit metadata and variables as required, (in the copied binder) and submit it to the publishing workflow.

In contrast, in a Browse Catalog *Forward Binder* Portal, the original binder is modified by the operator during metadata and variable editing, and submitted to the publication workflow—without making a copy. (If you don't need the binder after processing, you can automatically or manually delete it.) The operator can edit metadata and variables (in the original binder) directly in the main window and then click Submit to submit it to the publishing workflow.

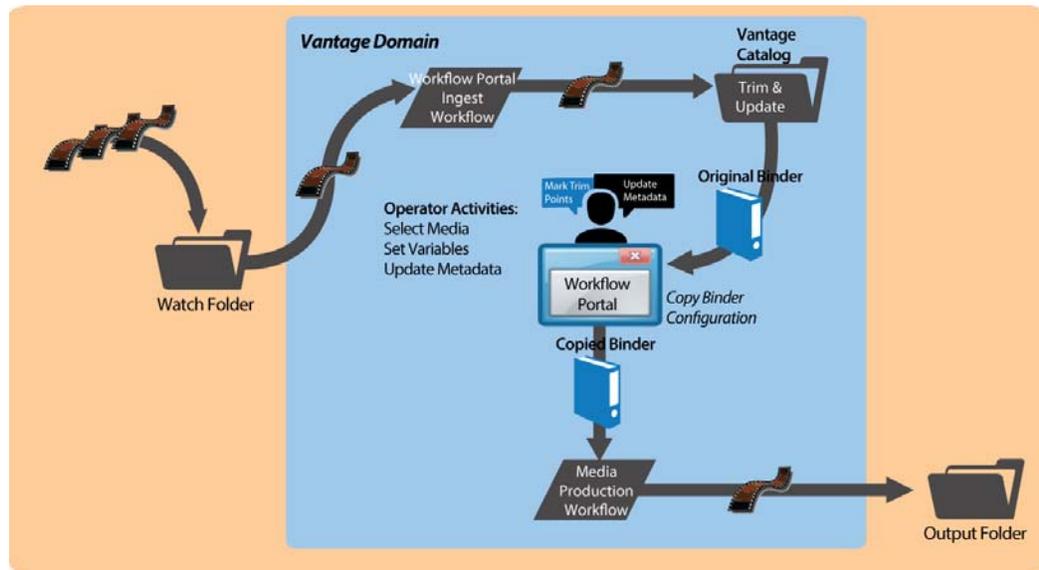
Here are the differences between Copy Binder and Forward Binder configurations:

- *Copy Binder*—the operator clicks the Submit button *before* editing metadata and variables—to create a copy of the original binder.
- *Forward Binder*—the operator selects a binder and edits its metadata and variables—then click Submit to process the job.

Depending on how the configuration has been set up, there will be variations in the features that are enabled, and the related tasks you can perform. In both configurations, the operator can review, edit, and update label-based metadata and variables for the selected media prior to submission to a publishing workflow.

Copy Binder Job Submittal Process

As depicted in the figure below, media is submitted to an ingest workflow through a watch folder, which performs any processing required, and registers the output media (organized with any other job-specific assets—metadata labels, for example—in a binder) into a specific Vantage catalog.



Alternatively, media can be submitted via a workflow, manually, or any other means.

In Workflow Portal, the operator browses catalogs and selects a binder, clicks Submit to generate the copied binder, and performs operator tasks as appropriate. This may include scrubbing a proxy, reviewing and editing metadata, and setting variable values for the job.

Next, the operator submits the job to a publishing workflow, which can be designed to perform any task required. The binder being processed is a copy of the original binder. The original binder and its contents remain untouched.

Job Submittal Steps

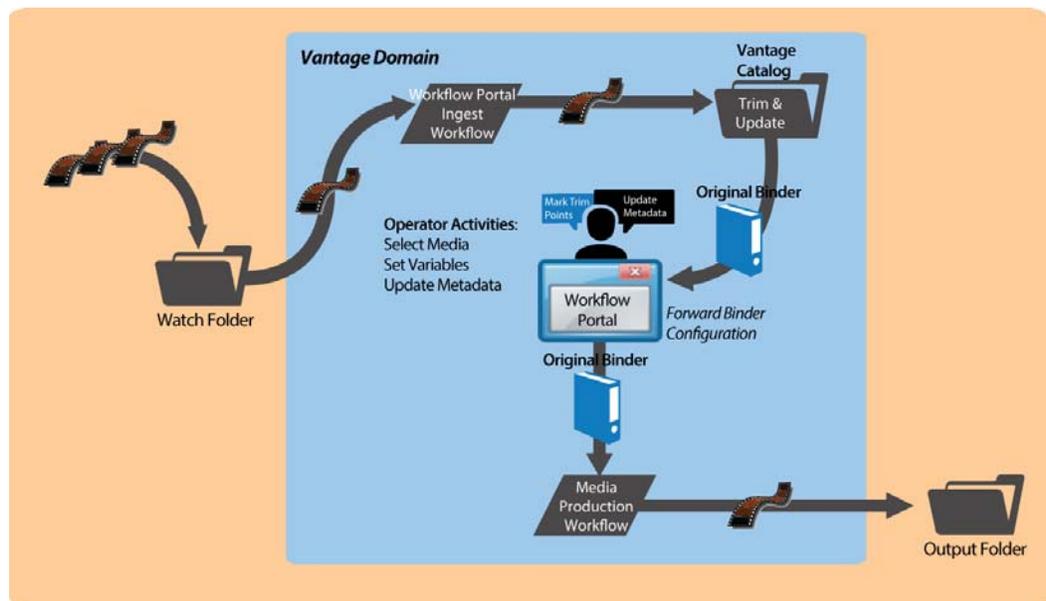
When you're using a Copy Binder Portal to process media, an operator follows this general process to submit a job (for details about a task, click on the link):

1. Make sure that the publishing workflow or workflows associated with this process are running (in Workflow Designer).
2. Browse catalogs to select a binder ([Browsing Catalogs for Media](#)) for processing.

3. Preview media in the Media Player ([Previewing Proxy Media in the Media Player](#)).
4. Check the workflow(s) you want to process the media with. This varies based on how the configuration is set up.
5. Click the Submit button to display the Submit Jobs window and prepare the copied binder's assets for processing.
6. In the Metadata Labels tab (if displayed), review/edit metadata ([Editing Metadata Labels](#)).
7. In the Variables tab (if displayed), enter values for each variable ([Specifying Variable Values](#)).
8. Click the Submit button to submit a job for processing the media and its assets in the target workflow(s).

Forward Binder Job Submittal Process

As depicted in the figure below, media is submitted to an ingest workflow through a watch folder, which performs any processing required, and registers the output media (organized with any other job-specific assets—metadata labels, for example—in a binder) into a specific Vantage catalog.



Alternatively, media can be submitted via a workflow, manually, or any other means.

In Workflow Portal, the operator browses catalogs and selects a binder, clicks Submit, and performs tasks as appropriate. This includes reviewing and editing metadata, and setting variable values for the job as appropriate.

Next, the operator submits the job to a publishing workflow, which can be designed to perform any task required. The binder being processed is the original binder.

Job Submittal Steps

When you're using a Forward Binder Portal to process media, an operator follows this general process to submit a job (for details about a task, click on the link):

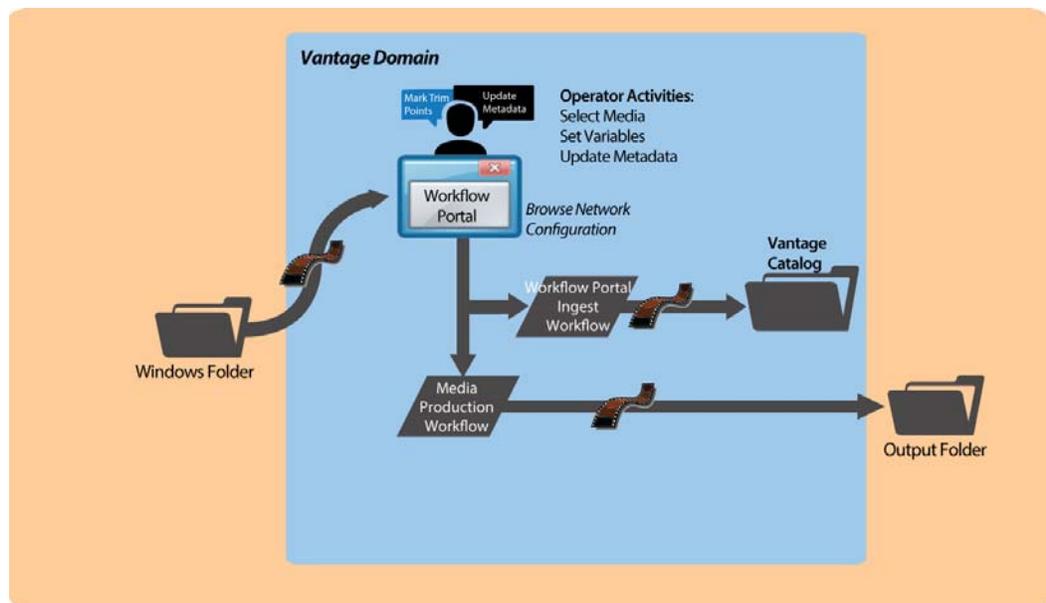
1. Make sure that the publishing workflow or workflows associated with this process are running (in Workflow Designer).
2. Browse catalogs to select a binder ([Browsing Catalogs for Media](#)) for processing.
3. Preview media in the Media Player ([Previewing Proxy Media in the Media Player](#)).
4. In the Metadata Labels tab (if displayed), review/edit metadata ([Editing Metadata Labels](#)).
5. In the Variables tab (if displayed), enter values for each variable ([Specifying Variable Values](#)).
6. Check the workflow(s) you want to process the media with. This varies based on how the configuration is set up.
7. Click the Submit button to submit a job for processing the media and its assets in the target workflow(s).

Using Windows Portals

Note: This configuration can only be used in the Workflow Portal Windows client.

The Browse Windows Network Portal (Windows Network Portal for short) allows you to select one or more media files from servers on a Windows network and submit them to target workflows, depending on how the configuration is set up.

Like Browse Catalog configurations, Browse Windows configurations are also broadly-focused. If the configuration permits, you can also add metadata to labels and edit variables to be submitted with the media. Unlike Browse Catalog configurations, assets normally associated with binders—pre-processed metadata labels, proxy files, etc.—aren't present.

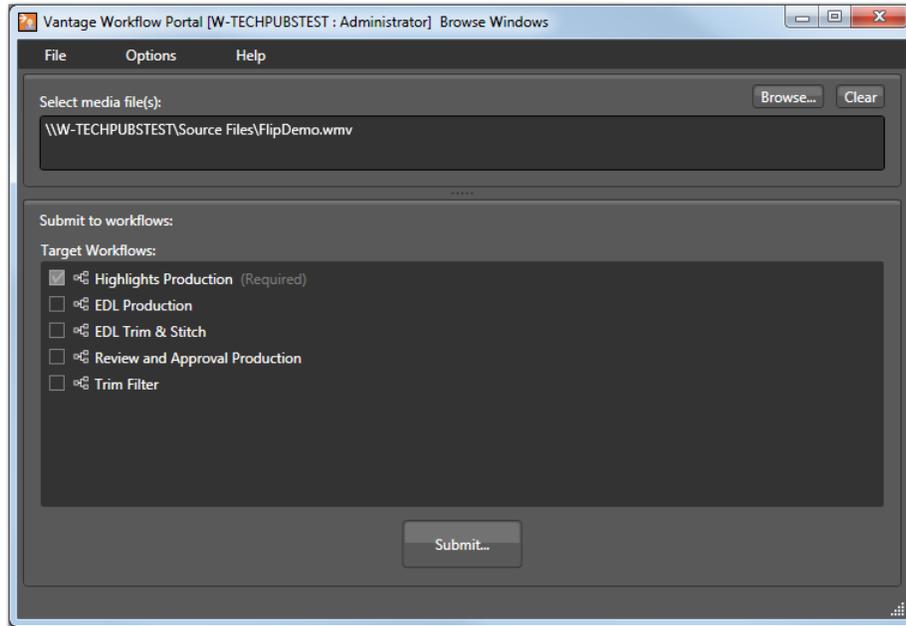


In Workflow Portal, the operator browses a Windows file system and selects media, and performs tasks as appropriate. This includes reviewing and editing metadata, and setting variable values for the job as appropriate.

Next, the operator submits the job to a publishing workflow, which can be designed to perform any task required.

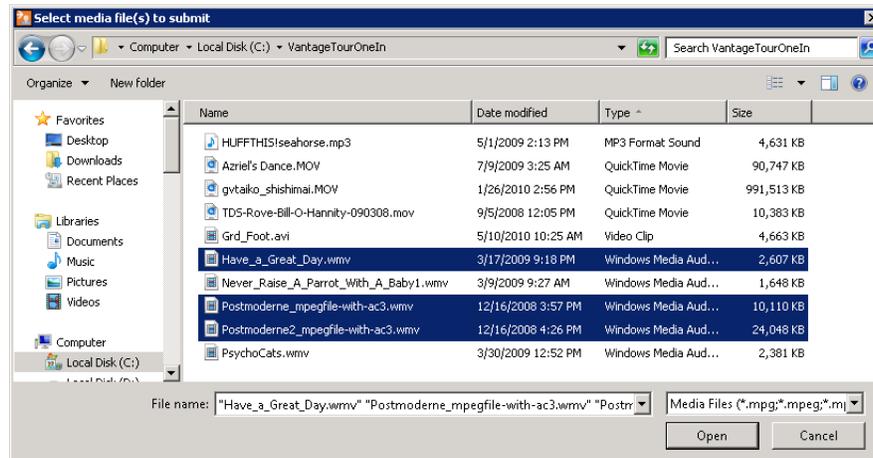
Job Submittal Steps

Windows Portal displays a Browse button and a list of selected files—instead of a Vantage Catalog list—as shown below.



1. Click the Browse button.

Windows Portal displays the *Select media file(s) to submit* dialog shown here.



2. Use the Select media file(s) to submit dialog to select the file(s) to process.

3. Click Open.

Each file that you open displays in the *Select media file(s)* list.

Repeat the Browse process as necessary, to select and add more files from any directories.

If the file list is not correct, you can edit the list manually. For example, you can select a given file path and delete it. Or, you can edit a path or filename, copy and paste file paths, or add new ones. To delete the list entirely, click Clear.

4. If multiple publish workflows are displayed in the Target Workflows list, check any target workflow to which you want to submit the media in the list.

If a checked box is not editable, this is a required workflow for this configuration.

5. Click Submit.

If the configuration does not provide any additional options, Windows Portal submits the selected media files to each of the selected publication workflows.

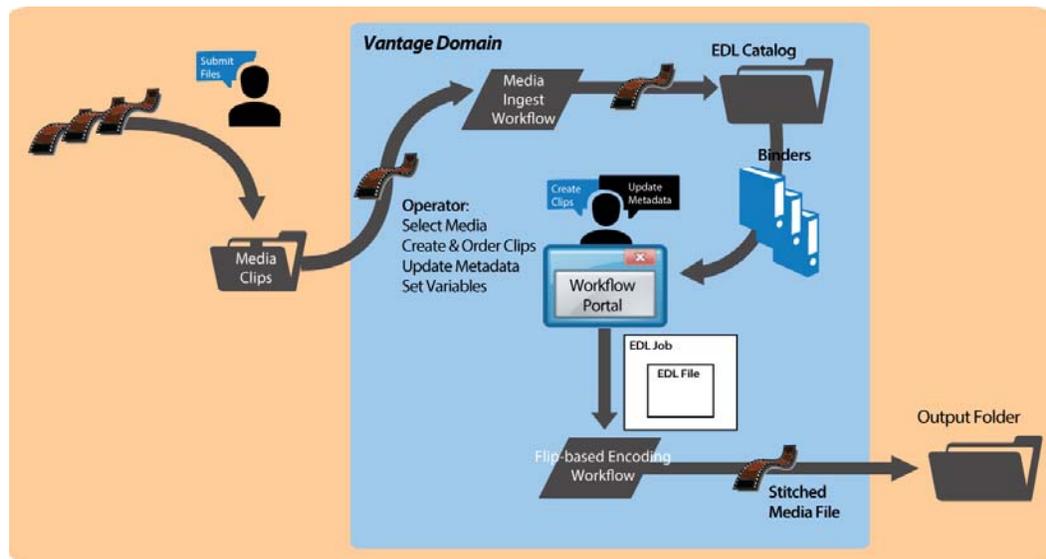
6. If the configuration supports metadata labels or variables, Windows Portal displays the Submit Jobs dialog with tabs for these options. Some configurations display a tab for metadata and variable editing.

7. When you are done preparing for submission, click Submit.

Using EDL Portals

Note: This configuration can only be used in a Workflow Portal Windows client.

The EDL Portal enables you to create an [Edit Decision List](#) (EDL) which you submit to a publishing workflow to process the EDL. You select the media to use by browsing catalogs and selecting [binders](#) created from previously-completed ingest workflow jobs. You add clips to the clip list, update metadata and variables, and then stitch the clips together, encoding them in the publishing workflow to which you submit the EDL.



The Telestream Edit decision list (TSEDL) files created in EDL Portal can only be processed by Flip action-based workflows.

- [Ingest Workflow for EDL Processing](#)
- [Job Processing and Submittal Steps](#)

Ingest Workflow for EDL Processing

To prepare media for stitching from an EDL, create an ingest workflow to encode it as required in a Flip action, and register it in a catalog, following these guidelines:

- All media must have the same frame rate, timecode notation, and frame size, and the same media essence.

- Use a Flip action (if necessary), to encode your production media using one of these encoders:
 - MPEG-2 Program Stream
 - VOD/MPEG-2 Transport Stream
 - MXF

The output media must use the nickname *Vantage EDL*, so that the EDL configuration can identify which media file to use for stitching.

- Use a Flip action to encode your proxy media for previewing/clipping.
 - QuickTime encoder, H.264 video codec, AAC audio codec, QuickTime 7.6.9 installed
 - OR
 - MP4 encoder, x264 video codec, AAC audio codec, QuickTime 7.7.6 installedAssign the nickname *Vantage Proxy*, so that the media player can play it.

Note: Be sure to encode proxies at the same rate and timecode notation as your production media. Clips that you mark use the proxy timecode—Workflow Portal applies it to the *Vantage EDL* media.

- Use a Keyframe action to produce keyframes—configured with the Keyframe encoder. Assign the nickname *Vantage Thumbnail*.
- Register the job in your target catalog to make it available to Workflow Portal.

Note: EDL Portal configurations expect binders to have media identified as *Vantage EDL*, *Vantage Proxy*, and *Vantage Thumbnail*. If you don't follow these guidelines, the binders may not display in the catalog, you won't be able to view the proxy to create clips or view keyframes, and your publication workflow may fail.

Job Processing and Submittal Steps

After you have processed all of the media you want to stitch through your ingest workflow, open Workflow Portal with an EDL configuration to create your EDL and submit it for processing. When submitted, the files are clipped to the EDL settings and merged together into a single output file by the publishing Vantage workflow.

Follow this general process to submit a job (for details about a task, click on the link):

1. Make sure that the publishing workflow or workflows are running (in Workflow Designer).
2. Browse catalogs to select a binder ([Browsing Catalogs for Media](#)) for processing.
3. For each binder you select, preview its media ([Previewing Proxy Media in the Media Player](#)) and use the Create EDL tab to add clips, setting mark-in/mark-out points to crop the media and update the metadata for each clip ([Creating Clip Lists/Segments \(EDLs\)](#)).

4. Optionally, use the Metadata Labels tab to preview metadata. You can't edit it in this panel.
5. In the Forward to Workflows (if displayed), check the workflow(s) you want to process the media with. This varies based on how the configuration is set up.
6. Click the Submit button to display the Submit Jobs window where you prepare the media's assets for processing.
7. In the Metadata Labels tab (if displayed), review/edit metadata ([Editing Metadata Labels](#)).
8. In the Variables tab (if displayed), enter values for each variable ([Specifying Variable Values](#)).
9. Click the Submit button to submit a job for processing the media and its assets in the target workflow(s).

Using CML Portals

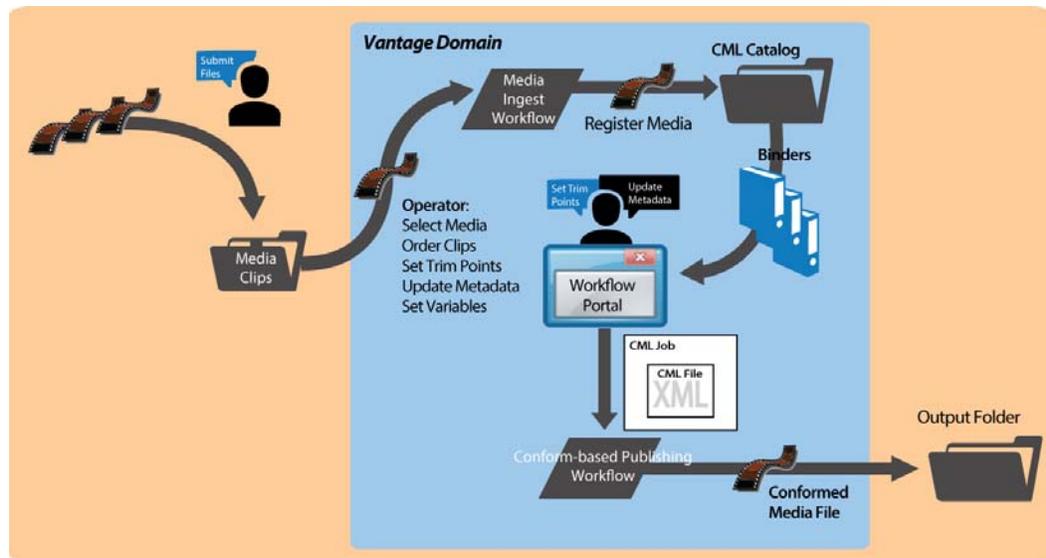
Note: This configuration can only be used in the Workflow Portal Windows client.

The CML (Composition Markup Language) Portal configuration is designed to create a [Composition \(CML\) file](#) that defines an EDL—the set of clips you’ve added from media registered in catalog binders, which you submit to a [Post Producer](#) publishing workflow with a Conform action. The Conform action processes the composition, stitching the clips and renders a single media file as output, based on the specifications in the CML.

Note: Use of the Conform action requires a Post Producer license. For details on using Post Producer and compositions, see the *Post Producer Developer’s Guide*.

The Workflow Portal Create EDL configuration also supports EDL processing—using the Flip action—with similar functionality. However, the primary difference—and advantage—of using a CML Portal configuration is that you can incorporate clips from different media files with mixed essences. While the EDL Portal requires that all clips have the same frame rate, frame size and video codec; the CML Portal does not have this restriction. CML processing also improves VANC and caption processing.

The CML configuration is a *create binder* configuration—a new binder is automatically created and submitted to the publishing workflow.



The composition (CML file) created by the CML Portal can only be processed by Conform action-based workflows.

- [Prototype CML Configuration Workflows](#)
- [Media Pre-processing, CML Creation, and Job Submittal](#)

Prototype CML Configuration Workflows

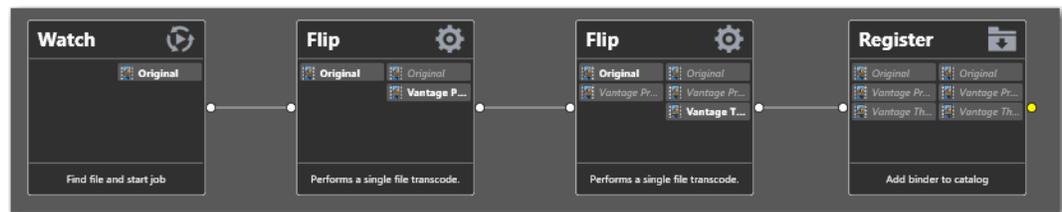
This topic describes prototype ingest and publishing workflows that you can use to set up a basic CML-based media processing system that involves operator-driven job submission using Workflow Portal.

Before you can use Workflow Portal to operate a CML-based media processing system, you must create the following two workflows:

- [Prototype CML Portal Ingest Workflow](#)
- [Prototype CML Portal Publishing Workflow](#)

Prototype CML Portal Ingest Workflow

Use this topic to create an ingest workflow to create a proxy, optionally encode the media as required, and register it in a catalog, following these guidelines:



- Assign the output media the nickname *Original* so that the CML Portal can identify which media file to use as the source media when it generates the CML file for processing in the publishing workflow.
- If required, use a transcode action (the Flip action, typically—not shown in the workflow above) to encode your media into one of the supported [Post Producer](#) formats (which accepts a much broader set of video, audio, and container formats than the Flip action does for EDL processing). See *Post Producer Developer Guide Formats* in the *Post Producer Developer's Guide* or the [Products > Post Producer > Specs](#) page on the Telestream web site.

If you are re-encoding your media, since you can't use the same nickname on input and output media in the same action, simply assign the input file a nickname other than *Original*.

- Use a Flip action to encode your proxy media for previewing/clipping.
 - QuickTime encoder, H.264 video codec, AAC audio codec, QuickTime 7.6.9 installed
 - OR
 - MP4 encoder, x264 video codec, AAC audio codec, QuickTime 7.7.6 installed
- Assign the nickname *Vantage Proxy*, so that the media player can play it.

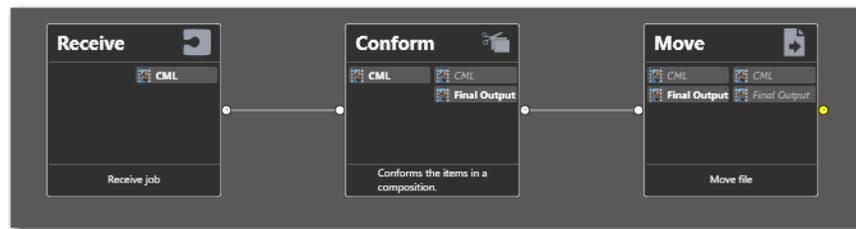
Note: Make sure that you encode the proxy at the same rate and with the same timecode notation as your production media.

- Use a Flip action to create a single thumbnail for viewing in the browser.
 - Encoder: Keyframe Encoder
 - Video Codec: JPEG
 - Container: JPEG FileAssign the nickname *Vantage Thumbnail*, to display them in Workflow Portal.
- Use a Register action to register the media in your target catalog to make it available in Workflow Portal.

Note: If you don't follow these guidelines, the binders may not display in the catalog, you may not be able to set mark-in/mark-out points, and your stitch workflow may fail.

Prototype CML Portal Publishing Workflow

Use this topic to create a publishing workflow to stitch and encode your output file.



Unlike the ingest workflow, the requirements for your publishing workflow are minimal. In almost every case, in practice, your publishing workflow will be far more complex than the prototype shown here.

- The publishing workflow must start with a Receive action, so that it can accept an input file from Workflow Portal. The nickname of the input file is *CML*.
- Use a Conform action to stitch and encode your media using the specifications in the auto-generated CML file you submitted. Configuration details are described in the man pages in the Conform action.

These are the two required actions; all other actions and configurations depend on your publishing workflow requirements.

Media Pre-processing, CML Creation, and Job Submittal

To prepare media for stitching, copy the media (one or more files) that you want to comprise your final output into the ingest workflow's watch folder.

The ingest workflow will submit a job for each file, and (depending on the workflow configuration), create a proxy, a thumbnail, optionally re-encode the media to meet Conform-action format requirements, and register the media in a binder in the target catalog.

After you have processed all of the media you want to stitch through your ingest workflow, open Workflow Portal with a CML configuration to create your CML and submit it for processing. When submitted, the files are clipped to the CML settings and merged together into a single output file by the publishing Vantage workflow.

When you're using a Create CML Portal to process media, an operator follows this general process to submit a job (for details about a task, click on the link):

1. Make sure that the publishing workflow or workflows associated with this process are running (in Workflow Designer).
2. Browse catalogs to select a binder ([Browsing Catalogs for Media](#)) for processing.
3. For each binder you select, preview the media and add clips, setting mark-in/mark-out points to crop the media ([Previewing Proxy Media in the Media Player](#)) and update the metadata for each clip ([Creating Clip Lists/Segments \(EDLs\)](#)).
4. Check the workflow(s) you want to process the media with. This varies based on how the configuration is set up.
5. Click the Submit button to display the Submit Jobs window where you prepare the copied binder's assets for processing.
6. In the Metadata Labels tab (if displayed), review/edit metadata ([Editing Metadata Labels](#)).
7. In the Variables tab (if displayed), enter values for each variable ([Specifying Variable Values](#)).
8. Click the Submit button to submit a job for processing the media and its assets in the target workflow(s).
9. Click Submit. If variables are included in this configuration, Workflow Portal displays the Variables window, where you can supply run-time values.

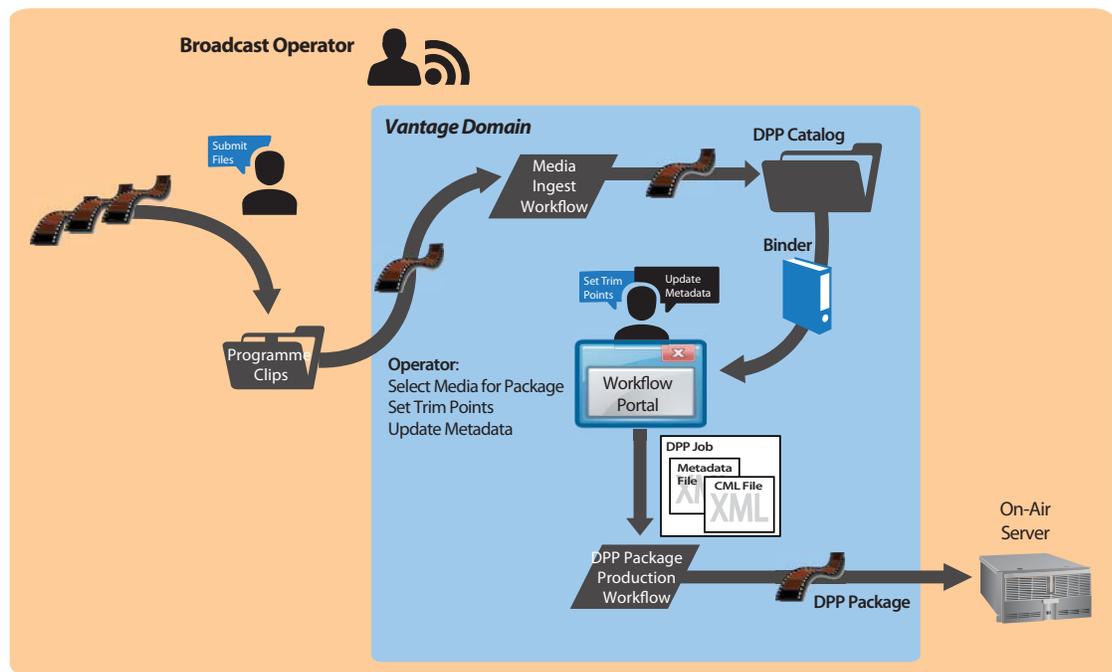
DPP Portal Overview

Note: The *DPP Packager User Guide* is also provided for complete details regarding the production of DPP-compatible media in Vantage.

The purpose of the DPP Portal is to enable operators to assemble and produce SD or HD media files that conform to the current DPP standard, for broadcast in the UK market.

This configuration can only be used in the Workflow Portal Windows client.

You use a DPP Portal to browse catalogs and select **binders** from completed ingest workflow jobs, enter metadata and mark programme parts, then generate DPP-compliant media which comprises the programme. A DPP configuration defines each field of DPP metadata in the programme, which may be given a default value, and may be marked as read-only.



The DPP portal is designed to allow you to:

- Create a DPP programme containing one or more segments
- Enter DPP metadata to accompany that programme
- Create a DPP XML file and a *Composition (CML) file* from which to generate the programme's media file (with *Post Producer*) and transcode to AS-11 with DPP metadata (with a Vantage Transcode Pro license).

Note: You can add a DPP Validate action (located in the Analysis group) to your target workflow to validate metadata in a DPP package.

After you have prepared the media you want to include in the package, you open Workflow Portal with the proper DPP configuration to create your DPP package, enter metadata as required, and submit it for processing.

The DPP Portal automatically generates a CML file that defines the media, unless the operator provides a custom CML. The CML file and all related media files are submitted to the target Vantage workflow for producing the package.

VOD | DAI Portal Overview

Note: The *VOD Producer | DAI User Guide* is also provided for complete details regarding the encoding media for VOD markets using VOD Producer Vantage.

The purpose of the VOD | DAI Portal is to enable operators to prepare source media and automate:

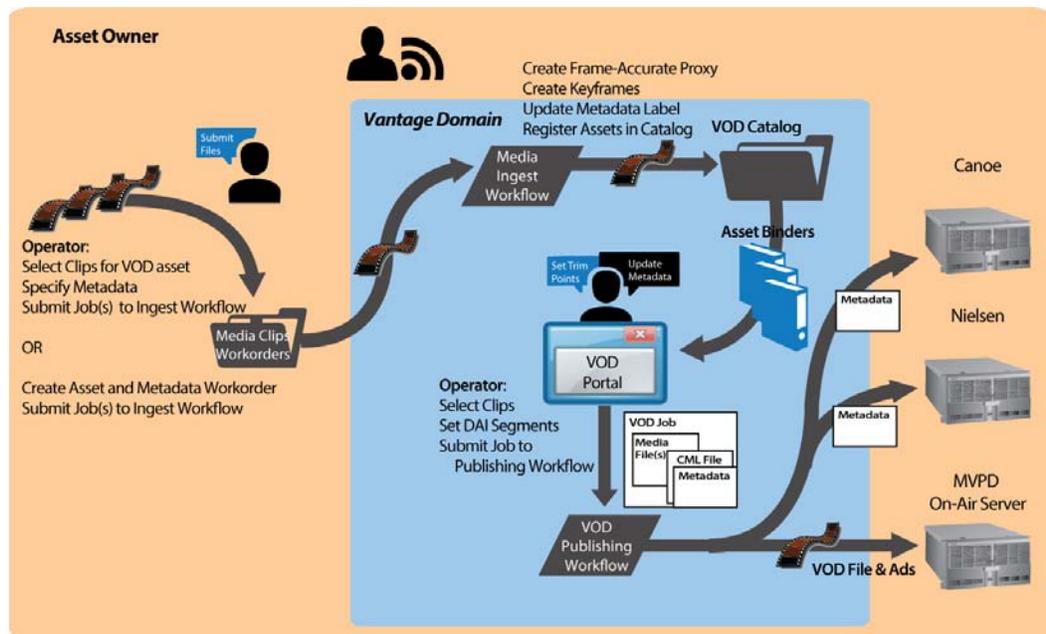
- CableLabs-compliant stream-conditioned media generation
- Canoe/BlackArrow-compliant dynamic ad insertion (DAI) location definition CSV (comma-separated value) files
- Nielsen audio watermarking.

VOD Producer performs media encoding and conditioning and Nielsen watermarking, along with automated delivery of programs and advertisements to MVPDs, and metadata to ecosystem partners in supporting workflows.

This configuration can only be used in the Workflow Portal Windows client.

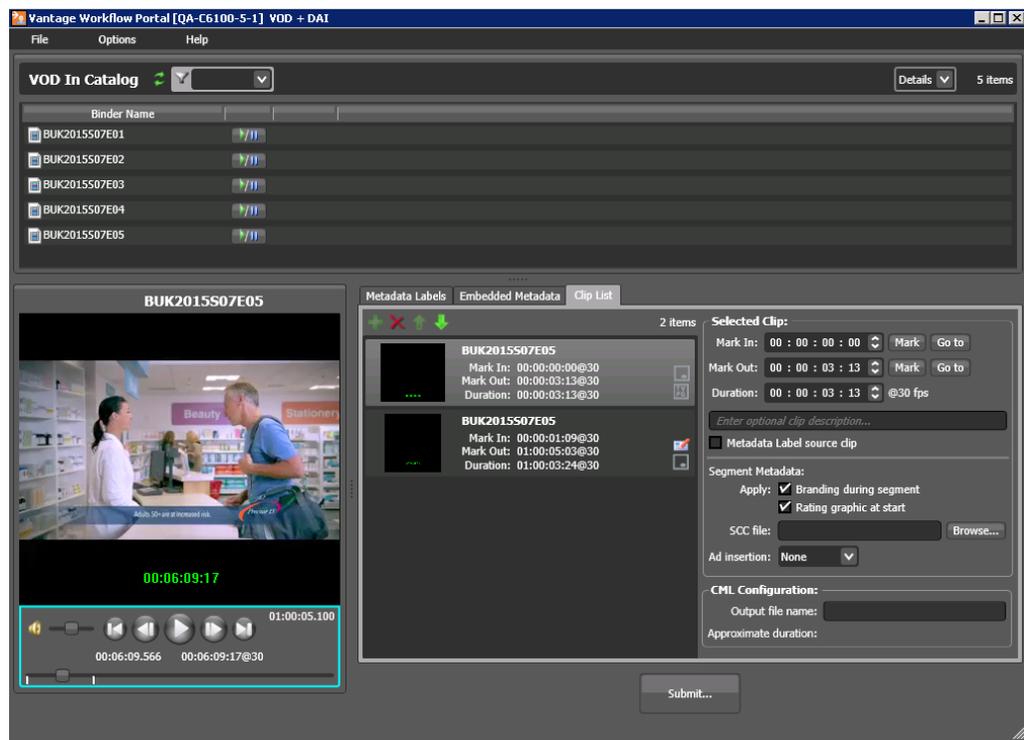
Note: You can also process CML and EDL files with automated VOD Producer and VOD Producer DAI workflows to produce VOD assets, without using VOD Portal. These are implemented using Vantage automation workflows, and are covered in the Post Producer Developer's Guide.

Generating and delivering VOD assets in VOD Producer involves at least two Vantage workflows. The diagram following illustrates the general process an operator follows to prepare, generate, and deliver VOD assets.



First, an operator selects a single file or a set of source media files, and submits them to an ingest workflow, supplying metadata as appropriate. The ingest workflow creates frame-accurate proxies and processes the metadata. It registers each source media file and its metadata, proxy, and keyframes in a catalog for access in VOD Portal.

Next, using VOD Portal, the operator selects and prepares source media for submission to the publication workflow.



In VOD Portal, the operator performs the following tasks as appropriate:

- Select and identify segments in source media
- Add interstitials for promotion and cross promotion
- Define frame-accurate locations and value for dynamic ad insertion
- Brand each segment
- Add SCC file to clips as appropriate
- Configure V-chip settings and graphics
- Specify copy protection requirements

The operator then submits the job to a publishing workflow, which performs these operations:

- Assembles the playlist composition
- Encodes the media as a CableLabs-compliant transport stream, optionally encoding to adaptive bit-rate or mezzanine formats

- Optionally, watermarks the audio for Nielsen measurement, produces Nielsen metadata and creates Nielsen documents
- Optionally, produces ad metadata and creates DAI location definition files for Canoe/BlackArrow
- Simultaneously distributes the VOD asset to the MVPD and delivers the metadata associated with the asset to ecosystem partners (Nielsen and Canoe).

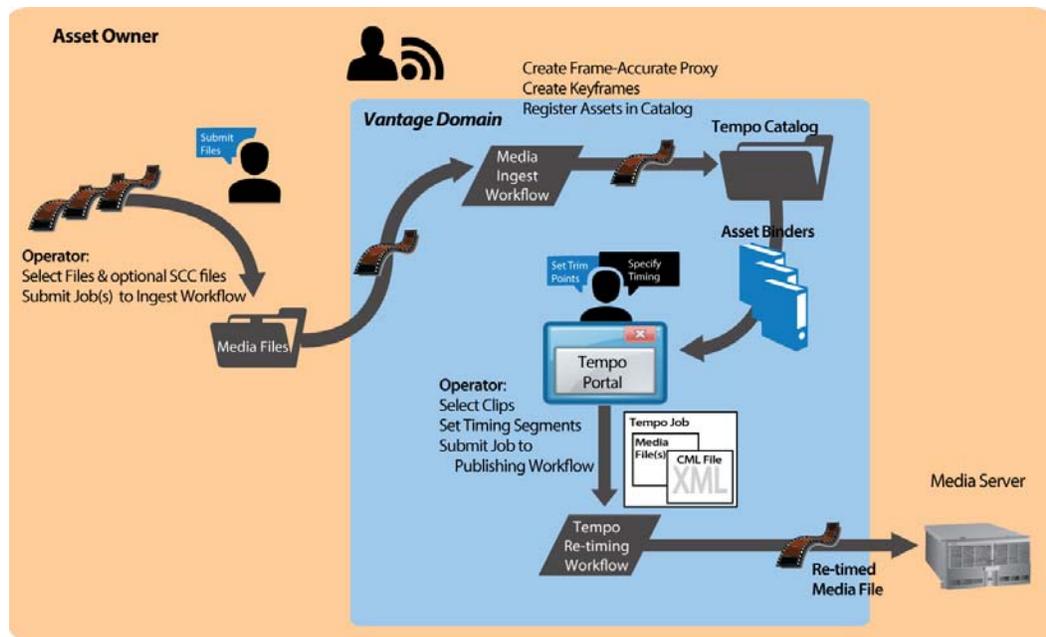
Tempo Portal Overview

Note: The *Tempo User Guide* is also provided for complete details regarding re-timing media using Tempo.

The Tempo Portal enables operator-driven re-timing of media assets—intelligently decreasing or increasing the running time of shows and segments by up to ten percent.

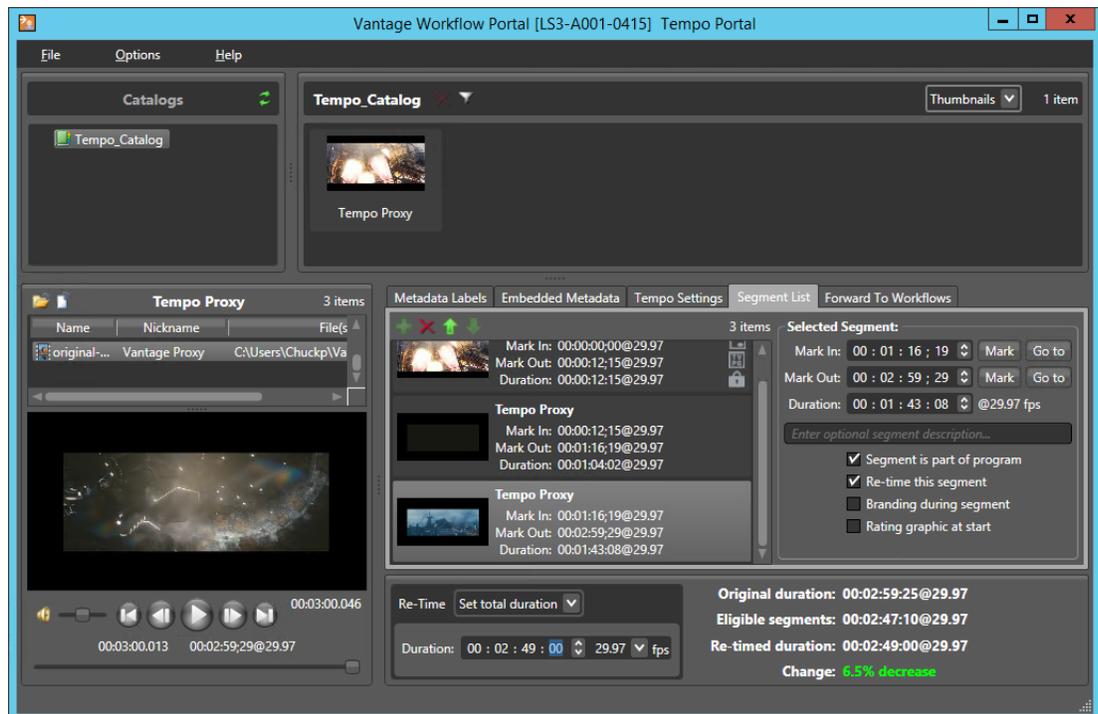
This configuration can only be used in the Workflow Portal Windows client.

Re-timing assets in Tempo involves at least two Vantage workflows. The diagram following illustrates the general process an operator follows to prepare and re-time media assets.



First, an operator selects a single file or a set of source media files, and submits them to an ingest workflow. The ingest workflow creates frame-accurate proxies and optionally re-encodes the media to meet Tempo-processing requirements. It registers each source media file and its proxy and keyframe in a catalog for access in Tempo Portal.

Next, using the Tempo Portal, the operator selects and prepares source media for submission to the publication workflow.



In Tempo Portal, the operator performs the following tasks as appropriate:

- Browse clips in the selected Vantage catalog.
- Drag clips into a segment list and view them in a built-in video player.
- Mark In/Out to identify clip segments and include/exclude them from re-timing.
- Add a graphic overlay (bug) and/or content rating graphic to one or more clips.
- Set exact overall clip duration, or increase/decrease clip time by a percentage.

The operator then submits the job to a publishing workflow, which re-encodes the media, re-timing it in the process, per the instructions specified in the XML file auto-generated by Tempo Portal.

Syndication Portal Overview

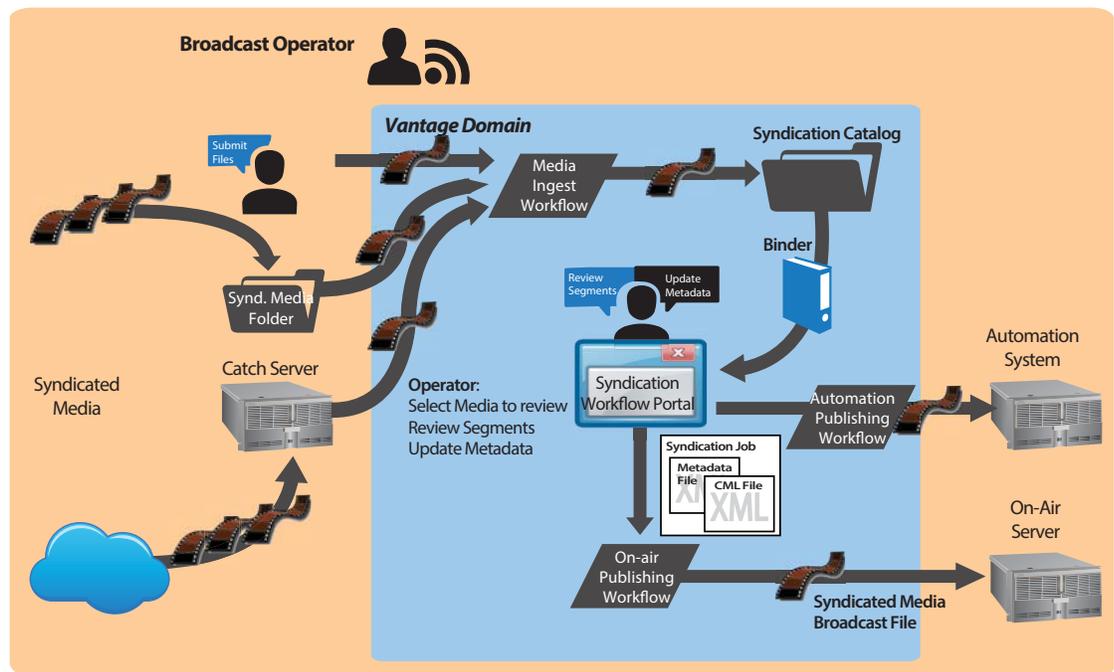
Note: The *TrafficManager User Guide* provides complete details regarding both automated and operator-intervention processing syndicated material for broadcast in TrafficManager.

The purpose of the Syndication Portal is to enable operators to review and prepare syndicated (long-form/episodic) media for submission to a publishing workflow to encode it for broadcast. This includes:

- Metadata label review and update
- Segment list review based on a template, and update as required.

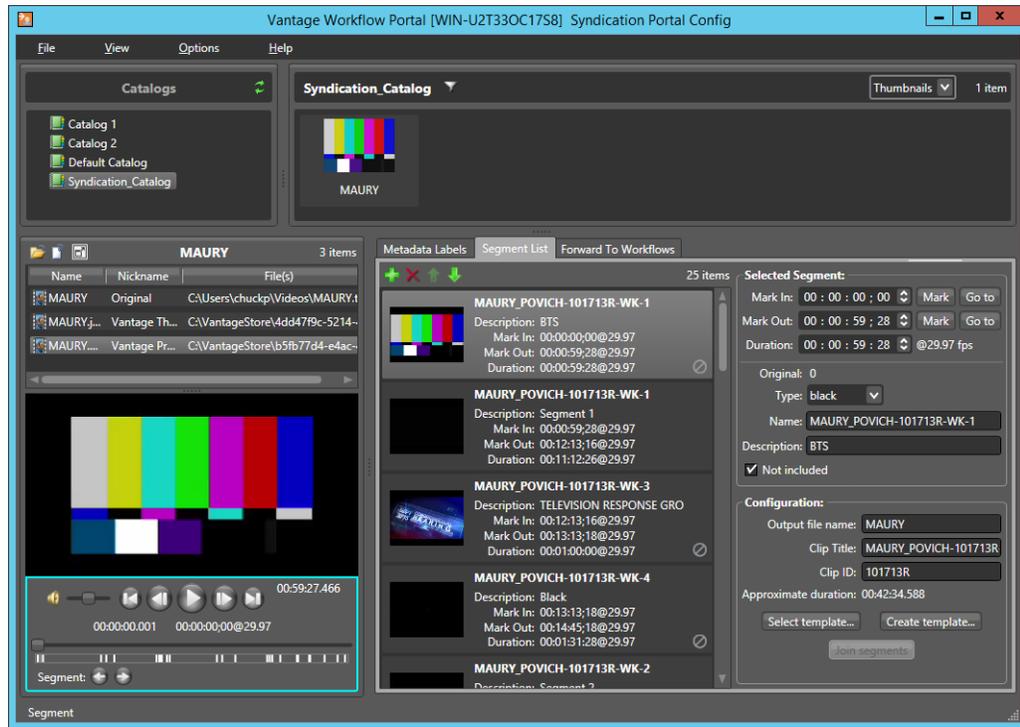
This configuration can only be used in the Workflow Portal Windows client.

Generating syndicated assets in TrafficManager via Syndication Portal involves at least two Vantage workflows. The diagram following illustrates the general process to prepare, generate, and deliver syndicated assets to a broadcast server.



First, an ingest workflow is triggered by an operator submitting a file, dropping it into a monitored folder, or automatically, via a catch server. The ingest workflow typically creates a frame-accurate proxy and a thumbnail, and transforms the metadata sidecar file into a mezzanine file for use in other Vantage workflows. It registers each source media file and its metadata, proxy, and keyframe in a catalog for access in the Syndication Portal.

Next, using the Syndication Portal, the operator selects and prepares source media for submission to the publication workflow.



In the Syndication Portal, the operator performs the following tasks:

- Select and review segments, updating attributes, adjusting timing and segment order, adding/modifying spots, joining/unjoining commercial segments, etc.
- Review any metadata labels, updating as necessary
- Submit the media to one or more publishing workflows.

When the operator submits the media, in Stitching and Segmenting modes, two files are auto-generated by the Syndication Portal: an updated mezzanine metadata XML file, and a CML file. However, in Pass-Thru mode generates a new XML file, but does not generate a CML file. Instead, it passes the source media from the ingest workflow—which must be nicknamed *Original*— to the publishing workflow, so that the program can be transcoded without having to change the program's timeline.

A typical Automation workflow uses the metadata file to perform these essential tasks:

- Uses the Automate action to convert the mezzanine metadata XML file into the format required for a given automation system (ASDB or Bxf, for example).
- Delivers the entire payload to the automation system.

A typical on-air server workflow uses the CML file to perform these essential tasks:

- Assembles the playlist composition into the broadcast media format required, using a Conform action (which requires a Post Producer license).
- Delivers the encoded media to a broadcast server.

Your publishing workflows will undoubtedly perform many tasks other than these essential tasks using a variety of actions.

Using the Job Status Views Web Application

Job Status Views is a web application that enables basic Vantage [job](#) management via a web browser. You can use Job Status Views to access job information and manage jobs in your Vantage domain from anywhere on the LAN, or via the Internet if you provide such access your Vantage domain.

Note: For information about Vantage web application requirements, starting and stopping web applications, and other basic topics, see [Vantage Client Programs Overview](#).

This chapter presents the following topics:

- [About the Job Status Views Web Application](#)
- [Job Status Views Web Application Overview](#)
- [Using Public and Private Views](#)
- [Sorting Jobs by Column](#)
- [Paging Through Job Tables & Setting Page Size](#)
- [Filtering the Job Table](#)
- [Highlighting Job States Row by Row](#)
- [Managing Jobs](#)
- [Troubleshooting](#)

About the Job Status Views Web Application

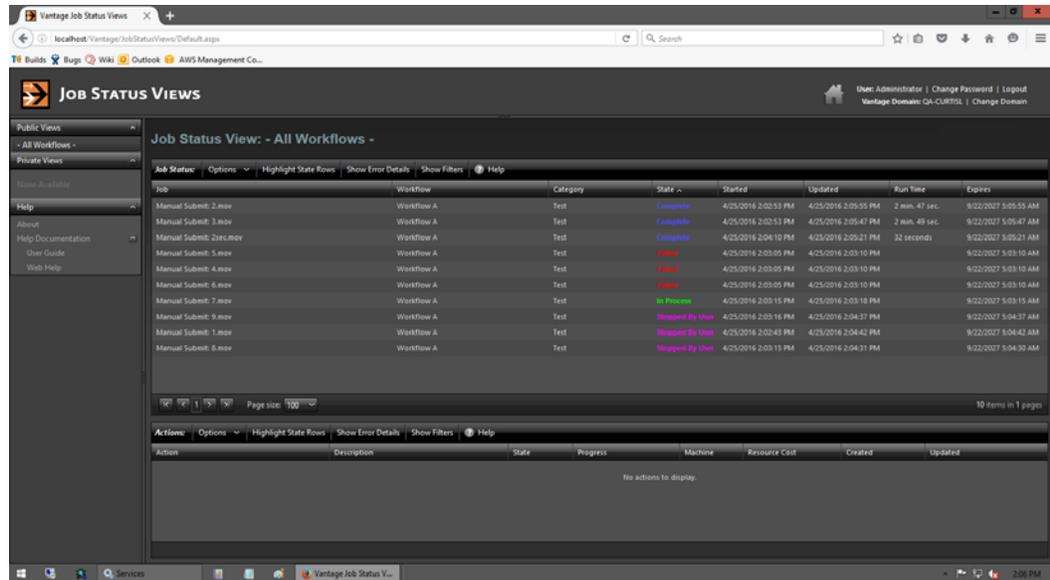
You can use the Job Status Views web application to do the following:

- Display information about submitted [jobs](#)
- Sort and filter job entries
- Highlight and identify jobs in different states
- Stop, restart, and delete jobs
- Troubleshoot job processing issues.

The *views* that you see in Job Status Views are defined by Vantage administrators, who control which job information displays and which job control functions (such as the ability to delete a job) are allowed. Views may be public or private. Public views are available to everyone, and private views are for use by specified Vantage users.

Job Status Views Web Application Overview

The Job Status Views web application displays the `jobs` table, as shown here.



The Job Status Views display is presented in three panels.

To display or hide the title or view panels, click the Show/Hide controls, as shown in the figure above.

- *Title panel (top)*—displays the home button, Vantage domain and user name, and controls to manage the user password, change domains, and to log out of the domain.
- *View panel (left)*—displays views that define which jobs are listed in the job list. This panel also includes controls to display product version information and this guide.
- *Job list panel*—Center, right—displays the job list in table format, along with the program's toolbar, which contains command buttons and menus.

Note: If you do not log in with a Vantage user name, private views display *None Available*.

The following sections describe how to use the web application:

- [Using Public and Private Views](#)
- [Sorting Jobs by Column](#)
- [Paging Through Job Tables & Setting Page Size](#)
- [Filtering the Job Table](#)
- [Highlighting Job States Row by Row](#)
- [Managing Jobs](#)
- [Troubleshooting](#)

Using Public and Private Views

All views are defined either as public or private, and are created and configured in the Management Console. Click on the view to select it, and display [jobs](#) for this workflow. Only private views that are enabled for your Vantage user name are listed.

The default view is the *All Workflows* public view, which displays jobs for all workflows. The information that *All Workflows* displays depends on how it is configured in the Management Console, and whether it is enabled or not. If no private views have been defined, or if you log in as *Public*, the Private Views list displays *None Available*.

The following topics provide more information on views:

- [About Public and Private Views](#)
- [About View Definitions](#)

About Public and Private Views

Public views are views that the Vantage administrator has made available to all Vantage users. Anyone who connects to the Vantage domain can display public views in the Job Status Views web application.

Private views are views that are available only to those Vantage users for which the Vantage administrator has enabled access. The administrator might configure custom views for different departments, users by role, or customers, and limit access to those views to the appropriate users.

About View Definitions

All views that you create are based on a specific workflow. In addition to being public or private, views limit the information that is displayed and specify which [job](#) control features (if any) the user has to use. If no controls are enabled, the view is considered a read-only view. You cannot create or configure views directly in Job Status Views; views are created by the Vantage administrator, via the Vantage Management Console, and specified as public or private; enforced by which user logs in.

There are many options for views, and displaying all options usually provides too much information for most applications. For example, it might be more convenient to display fewer columns. This view might only display active jobs, and it might disable controls that allow jobs to be restarted, stopped, or deleted.

The following topics provide information on what can be customized (and thus, may or may not be present) in views

- [Displaying Items in Views](#)
- [Controls in Views](#)

Note: Administrators should refer to the *Vantage Domain Management Guide* for information on how to set up custom views.

Displaying Items in Views

Two items of information are always displayed as columns in a view:

- *Job*—The name of the file submitted to start the job, and the type of submission: *Manual Submit*, for example.
- *State*—The current state of the job, which can be:

State—This column displays color-coded key words to identify the status of the job:

- *In Process*—the job is active (being processed).
- *Paused*—the actions in this job have been paused.
- *Complete*—all of the actions in this job have completed successfully.
- *Failed*—one or more of the actions in this job have failed.
- *Waiting*—the job is active, but is currently waiting for a resource (a service) to accept and process one of the actions in the workflow.
- *Stopped by User*—the job was stopped by a user.
- *Waiting to Retry*—the job is active, but is currently waiting for one of the actions in the workflow to re-execute.

These optional columns can be added to a view:

- *Total Progress*—The progress of the job (in percent) if still running.
- *Started*—The date and time the job was started.
- *Updated*—The date and time the job was last updated.
- *Workflow*—The name of the workflow that started the job.
- *Run Time*—Displays the total elapsed execution time for the job.
- *Expires*—The date and time when the job expires and both the job entry and the job entry is deleted.

Controls in Views

An administrator can configure the following controls in a view:

- *Enable*—Enables or disables use of the view.
- *Show Only In Process Jobs*—Displays only **jobs** that are currently running.
- *Stop | Start | Delete*—Enables or displays the ability of the operator to manage jobs—stopping, restarting, and deleting them.

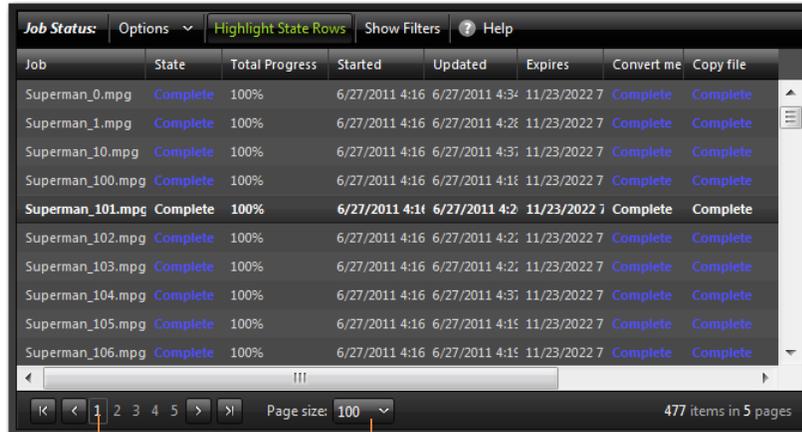
Sorting Jobs by Column

To sort the displayed [job](#) list according to the entries in any column, click that column label. Each time you click the column label, the sort changes in the following sequence: ascending order, descending order, and default sort order.

Paging Through Job Tables & Setting Page Size

A [job](#) table may span multiple pages. Use the page size control at the bottom center of the job list to specify the number of jobs to display on a page.

The page controls on the bottom left allow you to change pages and jump to the first or last page of a job list. The figure below indicates where the page controls appear in the job panel.



The screenshot shows a web application interface for 'Job Status'. At the top, there are navigation options: 'Options', 'Highlight State Rows', 'Show Filters', and 'Help'. Below this is a table with columns: Job, State, Total Progress, Started, Updated, Expires, Convert me, and Copy file. The table lists several 'Superman' jobs, all with a 'Complete' state and 100% progress. At the bottom of the table, there are pagination controls: a set of buttons for navigating between pages (1, 2, 3, 4, 5) and a 'Page size' dropdown menu set to '100'. The text '477 items in 5 pages' is displayed at the bottom right of the table area.

Job	State	Total Progress	Started	Updated	Expires	Convert me	Copy file
Superman_0.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:34	11/23/2022 7	Complete	Complete
Superman_1.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:28	11/23/2022 7	Complete	Complete
Superman_10.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:37	11/23/2022 7	Complete	Complete
Superman_100.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:18	11/23/2022 7	Complete	Complete
Superman_101.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:2	11/23/2022 7	Complete	Complete
Superman_102.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:21	11/23/2022 7	Complete	Complete
Superman_103.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:21	11/23/2022 7	Complete	Complete
Superman_104.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:37	11/23/2022 7	Complete	Complete
Superman_105.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:18	11/23/2022 7	Complete	Complete
Superman_106.mpg	Complete	100%	6/27/2011 4:16	6/27/2011 4:18	11/23/2022 7	Complete	Complete

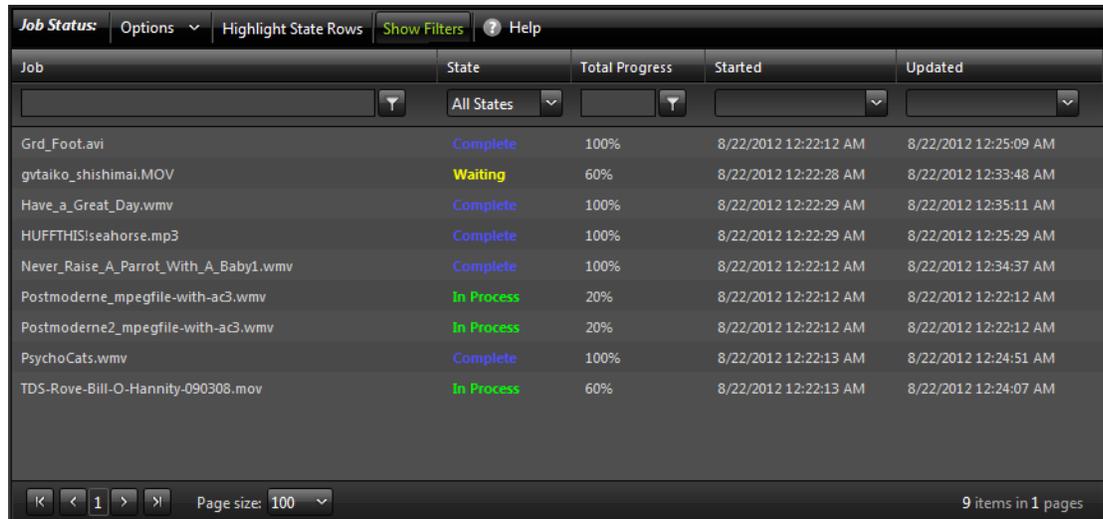
Page controls

Page size

Filtering the Job Table

Job filters allow you dynamically control which **jobs** display in the job table. The default configuration displays all jobs specified in the view for the workflow. However, during troubleshooting, you might want to display only those jobs that are in a failure state. Other times, you might want to display only those jobs that are in progress.

To display the Job List filters, click Show Filters in the toolbar. The filters are displayed directly below the column titles in the job list table, as shown in this figure:



The screenshot shows the Job Status web application interface. At the top, there is a toolbar with 'Job Status', 'Options', 'Highlight State Rows', 'Show Filters', and 'Help'. Below the toolbar is a table with columns: Job, State, Total Progress, Started, and Updated. The 'State' column has a dropdown filter set to 'All States'. The table contains 9 rows of job data. At the bottom, there is a pagination bar showing 'Page size: 100' and '9 items in 1 pages'.

Job	State	Total Progress	Started	Updated
Grd_Foot.avi	Complete	100%	8/22/2012 12:22:12 AM	8/22/2012 12:25:09 AM
gytaiko_shishimai.MOV	Waiting	60%	8/22/2012 12:22:28 AM	8/22/2012 12:33:48 AM
Have_a_Great_Day.wmv	Complete	100%	8/22/2012 12:22:29 AM	8/22/2012 12:35:11 AM
HUFFTHIS!seahorse.mp3	Complete	100%	8/22/2012 12:22:29 AM	8/22/2012 12:25:29 AM
Never_Raise_A_Parrot_With_A_Baby1.wmv	Complete	100%	8/22/2012 12:22:12 AM	8/22/2012 12:34:37 AM
Postmoderne_mpegfile-with-ac3.wmv	In Process	20%	8/22/2012 12:22:12 AM	8/22/2012 12:22:12 AM
Postmoderne2_mpegfile-with-ac3.wmv	In Process	20%	8/22/2012 12:22:12 AM	8/22/2012 12:22:12 AM
PsychoCats.wmv	Complete	100%	8/22/2012 12:22:13 AM	8/22/2012 12:24:51 AM
TDS-Rove-Bill-O-Hannity-090308.mov	In Process	60%	8/22/2012 12:22:13 AM	8/22/2012 12:24:07 AM

To hide filters, click Show Filters again.

Which **jobs** display in the job list is determined by all the filters working together to filter the list. If multiple filters are configured, the job list includes all jobs that meet the criteria of all configured filters.

- [Setting the Job Name Filter](#)
- [Setting the Job State Filter](#)
- [Setting the Total Progress Filter](#)
- [Setting the Date and Time Filters](#)

Setting the Job Name Filter

You can use the **job** name filter to limit the job list display to only those jobs with a name that meet criteria you specify. The following sections describe how to set and clear the job name filter:

- [Specifying a Job Name Filter](#)
- [Clearing the Job Name Filter](#)

Specifying a Job Name Filter

To specify a job name filter, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. In the text box above the job names, enter text that is part of job names that you want to include or exclude from the list.
3. Click the control to the right of the filter text box and select one of the following filters:
 - *Contains*—Displays all jobs that have a name that contains the text you specified.
 - *DoesNotContain*—Displays all jobs except those that have a name that contains the text you specified.
 - *EqualTo*—Displays only those jobs that have names that exactly match the text you specified.
 - *NotEqualTo*—Displays all jobs except those that have a name that exactly matches the text you specified.

Clearing the Job Name Filter

To clear a job name filter, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. Click the control to the right of the filter text box and select No Filter.

Setting the Job State Filter

The [job](#) state filter allows you to selectively exclude jobs from the job list based on the [job state](#). The default configuration displays jobs for all of the following [job states](#):

- Complete
- Failed
- In Process
- Stopped By User
- Waiting
- Waiting to Retry

When the job state filter is set to display jobs in all states, the filter name for the *State* column is *All States*. When the job state filters disable the display for jobs in one or more states, the filter name for the *State* column changes to *Custom*.

To specify a state filter, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. Click the control below the State column head and check and clear the checkboxes to define the states for which you want to display jobs.

Setting the Total Progress Filter

You can use the total progress filter to limit the [job](#) list display to only those jobs that meet progress criteria that you specify. The following topics describe how to set and clear the total progress filter:

- [Specifying a Total Progress Filter](#)
- [Clearing the Total Progress Filter](#)

Specifying a Total Progress Filter

To specify a total progress filter, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. In the text box below the Total Progress column name, enter the progress level you want to include or exclude from the list. The range is 0% to 100%.
3. Click the control to the right of the total progress text box and select one of the following filters:
 - *Contains*. Displays all jobs for which the total progress includes the value you specified.
 - *DoesNotContain*. Displays all jobs except those for which the total progress includes the value you specified.
 - *EqualTo*. Displays only those jobs for which the total progress matches the value you specified.
 - *NotEqualTo*. Displays all jobs except those for which the total progress matches the value you specified.

Clearing the Total Progress Filter

To clear a job name filter, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. Click the control to the right of the Total Progress text box and select NoFilter.

Setting the Date and Time Filters

The date and time filters allow you to limit the [job](#) display list to jobs that started, updated, or expire within a specified time period. There are three separate date and time filters for:

- Started
- Updated
- Expires

The following topics describe how to set and clear the date and time filters:

- [Specifying a Date and Time Filter](#)
- [Clearing a Date and Time Filter](#)

Specifying a Date and Time Filter

To set any of the date and time filters, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. Click the control to the right of the filter label box in the appropriate column.
If the filter label box is empty, no filter is defined. If a filter is defined, the filter label box displays *Custom*.
3. In the panel that appears, click on the calendar and clock buttons to set the date and time for the period start and period end.
If you omit the period *From* date and time, the program displays all jobs up to the *To* date and time. If you omit the period *To* date and time, the program displays all jobs after the *From* date and time.
4. When the period is defined, click Apply.

Clearing a Date and Time Filter

To clear a date and time filter, do the following:

1. If the filters are not visible above the job list, click the Show Filters button.
2. Click the control to the right of the filter label box.
3. Click Clear.

Highlighting Job States Row by Row

Job state highlighting allows you to use colors to make the different [job](#) states more visible. Or, you can use the same color for all [job states](#) to draw less attention to the job states.

To toggle job state highlighting, click the Highlight State Rows button in the toolbar. Each time you click the button, the job state highlighting changes from the current state to the opposite state.

Managing Jobs

Job management, when enabled in a view, enables you to stop, restart, and delete [jobs](#).

The following topics describe how to stop, restart, and delete jobs:

- [Stopping Jobs](#)
- [Restarting Jobs](#)
- [Deleting Jobs](#)

Stopping Jobs

You might want to stop a [job](#) to make Vantage resources available for another job, or you might stop a job in preparation for system maintenance.

To stop a job, do one of the following:

- Right-click on a job in the job list, and select Stop.
- Select a job in the job list, then click the Options menu in the toolbar, and select Stop.

Restarting Jobs

Jobs can be stopped by service or network interruptions, or an operator might stop a [job](#) to give another job priority. To restart a job, do one of the following:

- Right-click on a job in the job list, and select Restart.
- Select a job in the job list, then click the Options menu in the toolbar, and select Restart.

Deleting Jobs

You might want to delete a [job](#) because the job has failed, or because the output file is no longer needed, for example.

To delete a job, do either of the following:

- Right-click on a job in the job list and select Delete.
- Select a job in the job list, then click the Options menu in the toolbar, and select Delete.

Troubleshooting

Job Status Views enables troubleshooting and correction at the [job](#) level. For more comprehensive troubleshooting, use the Vantage Dashboard web application.

The first step in Vantage troubleshooting with Job Status Views is to identify the jobs that are having problems. There are several ways to do this:

- Enable *Highlight State Rows* to indicate job status with colors. Failed jobs are highlighted in red, and other states have distinct colors. (See [Highlighting Job States Row by Row](#) for more information.)
- Click the State column head to sort the jobs by the current state, then locate the group of jobs you want to investigate.
- Use filters to display only the jobs in the state you are investigating. (See [Filtering the Job Table](#) for more information.)

After you locate the jobs with issues, look for common traits among those jobs. The following are some possible issues and suggestions for resolution:

- *All jobs are failed or waiting.* Look for network, [database](#), or service issues. If all jobs within a certain time period had problems, there might have been a temporary issue that has since been corrected. Restart failed jobs as described in [Restarting Jobs](#).
- *All jobs for a specific workflow have failed or are waiting.* Look for issues with the workflow. Has the workflow ever worked? Are all resources used by that workflow available?
- *All jobs for a particular watch folder or destination have failed or are waiting.* If you know that all the troubled jobs use the same watch folder or destination, it could be that the location is not available.

After you resolve a problem, some jobs might restart on their own, and others might require further action from you. If your view is so enabled, you can take the following actions on jobs in the job list:

- *Restart*—Restart stopped jobs as described in [Restarting Jobs](#).
- *Delete*—Delete jobs as described in [Deleting Jobs](#).
- *Stop*—If a job seems unlikely to complete or stop, you can stop the job as described in [Stopping Jobs](#). Once a job is stopped, you can try to restart the job or delete it.

Glossary

ABR Optimize action

The ABR Optimize action is designed to produce high-quality, adaptive-bitrate (ABR) packages which significantly reduce delivery bandwidth and distribution costs while ensuring perceived viewing quality. All Multiscreen actions are executed by the [Multiscreen Service](#). Based on the SSIMplus quality measurement suite from SSIMWave, service providers and content creators can use the ABR Optimize action to set guaranteed quality levels using a measurement technique that closely tracks actual viewer perception.

action

An *action* is the smallest unit of work that can be specified in a Vantage workflow. Actions are connected together in a workflow to perform a useful task. Each action must be configured to perform its task in the context of the workflow, using an action [Inspector](#). Action inspectors are specific to each type of action.

Actions are grouped by functional categories: communication, transcoding, file operations, metadata processing, etc. Each action is defined by the specific task it performs. For example, an email action, or a metadata label/file transformation action.

Actions have limited interdependency, and so, are very flexible. You may impose limitations on actions in a workflow. For example, you might require action B to depend on action A in a Vantage workflow.

During execution, actions operate on files, [binders](#), variables, and states, and they generate an action state when they complete. Actions are executed by Vantage services, which perform the requirements of the action.

action state

The *action state* describes the condition of an action execution in process and after completion.

During execution, an action may be Queued | Paused | In Process | Waiting. After execution, an action's final state may be Success | Ignore | Fail. Certain actions (Decide/Examine/Compare/Identify, for example) allow the use to specify the post-execution state, including Ignore. For all other actions, the post-execution state is set by the service, and is either Success or Fail. These states display in the Vantage Workflow Designer Job Status tab.

Action states are always passed to subsequent actions. The incoming state is tested by the next actions to determine whether or not following actions should execute.

Some actions allow you to specify that an action should execute on a specific state (right-click the action, and select Perform On > Success | Fail | Ignore | Any).

If an action fails, then the next action will inherit the Fail state and (in most cases) will not execute. If one action fails, the entire [job](#) fails.

Similarly, if you specify an action to set the Ignore state, the next action will inherit the Ignore state and will also likely not execute. Certain special actions, such as Message, can be configured to perform on any state (Fail, for example)—this allows workflows to send an email if they detect a failure.

Action states have precedence when an action receives states from multiple incoming actions (a merge of multiple branches):

- If at least one incoming state is Fail, regardless of other incoming states, the action will inherit the Fail state. Fail has precedence over all action states.

- If there is no Fail state, but at least one Success state, then the action will inherit the Success state. Success has precedence over Ignore states.

- If all incoming states are Ignore, the action will inherit the Ignore state. Ignore has lowest precedence of the three states. If an action receives an Ignore state and does not explicitly fail, then it emits a Success state. Otherwise, it emits a Fail state *unless* it is an action which can emit Ignore, and you have configured it to do so.

Agility Service

The *Agility Service* is the Vantage component which executes the actions relating to Agility [job](#) submission and interaction with Agility via the [Job Profile action](#), [Job XML action](#), and [Process MMF action](#). Agility features are enabled by the Vantage Agility ECS license.

All-in-one domain

An *all-in-one* (or single-node or single-server) Vantage domain is one in which all server components of Vantage—the Microsoft SQL Server [database](#), all Vantage services, and the optional Vantage web applications—are installed and operate on a single computer.

See also [Vantage array](#).

Analyze action

An Analyze action, which is executed by the [Analysis Service](#), enables you to perform analysis on media using a variety of analysis tools, specifying the result of the analysis in variables, for use in downstream actions.

Analysis Service

The *Analysis Service* is the Vantage component which executes the actions relating to the analysis of content: [Examine action](#), [Compare action](#), [Identify action](#), [Analyze action](#), [Report action](#), [QC action](#), and [MediaInfo action](#).

Archive action

An *Archive action*, which is executed by the [Staging Service](#), uses the selected archiver (TAR, for example) to convert the selected input file to another format, usually in preparation for copying, moving, or deploying a file to a given system that has special file format requirements.

array

Another term for [Vantage array](#).

Aspera Service

An *Aspera Service* implements the Aspera software for Vantage, and provides two-way communication between workflows (and the [Faspex Delivery action](#)) utilizing the Aspera software itself.

Associate action

An *Associate action* uses the [Monitor Service](#) to continually (and at regular periods) poll a target location (a directory, for example) on a device or file system (FTP, network folder, etc.) to discover new files, based on some permutation of the name of the file being processed by the current job.

Associate actions can be executed on any action state.

Generally, the Associate action uses the file name of an existing media file or attachment as the basis for discovering new files. For example, if media file *Vantage.mpg* is currently in the workflow, then the Associate action may look for *Vantage.scc*. This behavior can be configured in the Associate action's [Inspector](#).

Associate actions begin executing when a [job](#) is submitted, and execute until a new file is discovered—subsequent actions do not execute until the file is found. When the new file is discovered, the Associate action makes the file available to the other actions in the workflow.

Configuration is accomplished in the inspector, and is based on the target device/file system being monitored and other requirements.

attachment

An *attachment* is a non-media file that is associated with media during execution of a workflow. For example, an attachment may be an XML file that contains metadata, an SCC caption file, or an STL or PAC subtitle file. An attachment may also be a PDF file, Excel spreadsheet, or Word document, for example. Attachments are identified and processed using nicknames for simplicity. Processing is optional—attachments may be simply passed through a workflow for storage with the processed media and registered in a Vantage [catalog](#).

attachment nickname

An *attachment nickname* is an alias or alternate name that is assigned to an attachment file during Vantage workflow execution. When an attachment file is submitted to a workflow, the actual file name and location is stored in a Vantage [binder](#) along with a nickname as defined in the workflow. Within the workflow, all references to a file are by nickname. However, when Vantage needs to access a file, Vantage uses the actual file name and location stored in the binder.

See [media nickname](#) and [nickname](#).

AudioTools action

An *AudioTools action* is an optional, licensed feature in Vantage. It uses the [AudioTools Service](#) to enable Vantage workflows to utilize and interact with various AudioTools products from Minnetonka Audio Software. The AudioTools Custom Workflow executes a selected, pre-defined AudioTools Server workflow. AudioTools Loudness Control executes the typical loudness processes, including hitting multiple target parameters using an iterative processing pass.

AudioTools Service

The *AudioTools Service* implements the AudioTools Connector and enables Vantage workflows to utilize and interact with various AudioTools products from Minnetonka Audio Software.

Aurora action

An *Aurora action* is an optional, licensed feature in Vantage. It uses the [Aurora Service](#) to enable Vantage workflows to utilize and interact with various QC tests provided by the Digimetrics Aurora software. The tests provide the ability to determine whether a particular input media (specified by

nickname) either passes or fails a particular QC check. Each test also generates a report file that may be utilized during later stages of the workflow.

Aurora Service

The *Aurora Service* implements the Digimetrics Aurora software for Vantage, and provides two-way communication between workflows (and the [Aurora action](#)) utilizing Aurora and the Aurora software itself.

Automate action

The *Automate action*, which is executed by the [Communicate Service](#), is similar to the Notify action. It contains system-integration extensions which are relevant to TrafficManager workflows, enabling you to save job or other metadata to a file and interface/integrate with external automation systems. This capability ranges from writing XML-based material to a file system to direct integration with specific automation systems.

In TrafficManager applications, this action is useful to notify automation systems that a commercial has been processed and is available for air. For example, a Notify action can create text or CSV dublists and provide them to automation systems that are capable of processing dublists in that format.

Baton action

A *Baton action* is an optional, licensed feature in Vantage. It uses the [Baton Service](#) to enable Vantage workflows to utilize and interact with various QC tests provided by the Baton software. The tests provide the ability to determine whether a particular input media (specified by nickname) either passes or fails a particular QC check. Each test also generates a report file that may be utilized during later stages of the workflow.

Baton Service

The *Baton Service* implements the Baton software for Vantage, and provides two-way communication between workflows (and the [Baton action](#)) utilizing the Baton software itself.

binder

A *binder* is a collection of file and metadata information, created for each [job](#) that Vantage executes. A binder contains media and attachment file references and metadata labels that were ingested or created during the job. While a binder is created for every job, many binders are never used. Therefore, only media processing scenarios which require operator intervention should use the [Register action](#) in ingest workflows to create binders in a user-accessible [Vantage catalog](#).

You use the Register action to automatically create binders during a job, and you use Exist to determine if a binder of a certain name has already been created. Binders are most often named by some permutation of the name of the file that started the job. Binders that are not explicitly registered are accessible to users only in Workflow Designer, in the Job Status tabs.

Vantage catalogs and their binders are accessible in Workflow Portal. Binders are saved in the [Vantage domain database](#) until deleted manually or by job expiration policies. You can also view binders in the Vantage Management Console, and manually create them there—or delete them.

Binders are not file folders and are not part of the Windows file system—they are records in the Vantage database. Thus, binders do not contain the files themselves; they only have the paths to those files.

Camera Ingest action

A *Camera action* is an [origin action](#); it uses the [Monitor Service](#) to regularly poll a target location (a directory, for example) on a card reader device or Windows file system to discover new camera files.

When a new file or shot is discovered, the Camera action submits a [job](#) for the workflow which it is part of, for processing.

Capture action

A Capture action is an [origin action](#); it supports Open Workflows on the outbound side and it is used to capture live SDI inputs and output captured media files to Live Storage using the specified output container and encoder. The Capture action is executed by the [Live Services](#), and only works in a Vantage installation on a Lightspeed Capture Server.

catalog

Similar in concept to the folders in a file system, a Vantage *catalog* is a container that stores [binders](#). *Catalog folders* are sub-containers that organize binders. To access a binder, Workflow Portal operators search through the visible catalogs and folders, just as they might sort through folders in a file system.

Catalog Service

The *Catalog Service* is the Vantage component that executes the [Register action](#) and [Exist action](#).

Catch action

A *Catch action* is an [origin action](#); it is a specialized origin action for ingesting commercials and syndicated media assets (including metadata) from catch servers in TrafficManager applications. It uses the [Traffic Service](#) to regularly poll the catch server to discover new files.

When a new file is discovered, the Catch action exposes all relevant metadata and submits a job to the workflow for processing. Typically, the workflow is an ingest workflow which localizes the media, populates a metadata label, creates proxies and thumbnails, and registers the asset in a Vantage [catalog](#). For more details, see the TrafficManager User Guide.

Cerify action

A *Cerify action* is an optional, licensed feature in Vantage. It uses the [Cerify Service](#) to enable Vantage workflows to utilize the Tektronix Cerify suite of QC components. Cerify is a fully automated system for verifying and checking file-based content.

Cerify Service

The *Cerify Service* implements the Cerify software for Vantage, and provides two-way communication between workflows (and the [Cerify action](#)) utilizing the Baton software itself.

Chronicle action

The *Chronicle action*, along with Colocate, Compose, and Conform actions, are part of the optional, licensed [Post Producer](#) feature in Vantage. The Chronicle action uses the [Edit Service](#) to convert post-rendered Composition XML files into formats for use in other systems—ad-insertion systems, for example.

Cloud Flip action

The Cloud Flip action is used to submit media to the Telestream Cloud platform from Vantage workflows via the Telestream Cloud API to a particular profile that a user specifies. The Cloud Flip action is executed by the [Telestream Cloud Service](#). As part of the submission, the specified input file is uploaded and then processed according to the rules associated with the specified Telestream Cloud profile.

Colocate action

The *Colocate action*, along with Chronicle, Compose, and Conform actions, are part of the optional, licensed [Post Producer](#) feature in Vantage. The Colocate action uses the [Edit Service](#) to ingest Composition XML files with references to non-file-based URLs (for example, Amazon S3), localize the files, and convert the media references in a copy of the CML into paths to the localized files.

common action

Common actions are actions that are implemented in every Vantage Service; they are not restricted execution by a single service. See [Receive action](#), [Forward action](#), [Decide action](#), [Compute action](#), [Construct action](#), [Synchronize action](#).

Communicate Service

The *Communicate Service* is the Vantage component that executes the actions relating to electronic messaging: [Message action](#), and [Notify action](#).

Compare action

A *Compare action* uses the [Analysis Service](#) to compare media files based on certain metrics (for example, PSNR). These metrics can generally be published as variables or as metadata labels.

Compose action

A *Compose action*, along with Chronicle, Colocate, and Conform actions, are part of the optional, licensed [Post Producer](#) feature in Vantage. The Compose action uses the [Edit Service](#) to convert various media descriptor file formats (Anystream AN2, Final Cut Interchange XML, Simplified Avid AAF, QuickTime Reference, Adobe FC7XML, and Telestream TSEDL) into a Composition XML file so that it can be used by the Conform action to compose media) into a Composition XML file so that it can be used by the Conform action to compose media.

Composition (CML) file

A *Composition file* is an XML schema that provides the vocabulary to describe media elements and their temporal and spatial relationships on a video timeline. Composition files (or Composition XML objects in a computer program) are submitted to a Conform action in a workflow to render the media file from the description.

Compute action

A *Compute action*, which is implemented in every Vantage service, performs various arithmetic and string manipulation functions, permitting you to create and modify values in variables, for use in downstream actions. This action is open workflow capable.

Conform action

A *Conform action*, along with the other Edit actions, are part of the optional, licensed [Post Producer](#) feature in Vantage. The Compose action uses the [Edit Service](#) to assemble and optionally transcode multiple video and still image files into a single output file, applying filters as specified by you. The input files and related specifications for the output file are all defined in a Composition XML file. This action is open workflow capable.

Construct action

A *Construct action*, which is implemented in every Vantage service, enables you to construct complex strings, paths, and math expressions from literals, variables, and tokens, for use in downstream actions. This action is open workflow capable.

Copy action

A *Copy action* is executed by the [Transport Service](#) and is used to replicate a file from a source target (file system/device and directory) to a destination target (file system/device and directory). It typically performs this task by copying the file to the destination.

Copy actions can be executed on any action state. This action is open workflow capable.

database

The term *database* is the common term used to refer to the [Vantage domain database](#), where all specifications for the domain are stored, along with workflows and job history.

Change Log

The Change Log captures changes to the Vantage domain configuration and operation and records the following details: date and time of change, Vantage user who made the change, host computer where the change occurred, change summary message.

Data Collection Utility

The Data collection utility enables you to collect relevant information about selected services for transmission to Telestream during a troubleshooting session. You can also log point-in-time details about a selected service into a log file for diagnostics purposes.

Decide action

A *Decide action*, which is implemented in every Vantage service, is an action which allows you to explicitly set the action state based upon analysis of variable values at runtime. It is most commonly used to determine whether or not subsequent actions (or actions in a given branch) in a workflow should execute.

When the Decide action is used, the state set by the Decide action is passed to the next action. Typically, more than one Decide action is required to support decision branches. For example, if one branch is for HD media, it will start with a Decide action that will set the state to Success for HD content, or set it to Ignore otherwise; if another branch is for all other media, it will start with a Decide action that performs the opposite behavior.

See [variable](#), [action state](#).

Delete action

A *Delete action* is executed by the [Transport Service](#), and is used to permanently remove a file from a source target (file system/device and directory). Delete actions can be executed on any action state.

Deploy action

A *Deploy action* is executed by the [Transport Service](#), and is used to save the specified files to a destination outside the Vantage domain. Unlike Delete, Move, or Copy actions, Deploy actions allow multiple files to be operated on simultaneously, and do not maintain a reference to those files in the [binder](#) after completion.

distributed domain

Another term for [Vantage array](#).

domain

See [Vantage domain](#).

DPP Validate Action

A *DPP Validate* action is executed by the [Analysis Service](#). You can use the DPP Validate action to confirm compliance of a DPP metadata XML file. If the XML file passes validation, TRUE is generated; otherwise FALSE is generated. You can test the results of the action downstream to change the workflow's actions based on the validation results. Optionally, you can also generate a report.

Dublist action

A *Dublist action* is a specialized [origin action](#) for ingesting dublist files from a specified server and directory in TrafficManager applications. It uses the [Monitor Service](#) to regularly poll the server to discover new files.

When a new dublist file is discovered, it is parsed by the specified scheme and new entries are added to the master dublist maintained by Vantage. The Dublist action simultaneously polls the selected Vantage [catalog](#) for any media files which match entries in the master list; when found, it submits a [job](#) to a TrafficManager application workflow for processing. The Dublist action uses the [binder](#) name as the unique identifier for the commercial, so it should be set to the Ad ID.

Typically, the workflow is an on-air processing workflow which transcodes the media, optionally trims the clip and alters audio for compliance. Then, it delivers the media to an on-air server and notifies an automation system. For more details, see the TrafficManager User Guide.

Dublist Portal

Dublist Portal is a client Windows program provided as part of a TrafficManager license. Dublist Portal enables customers who are performing advertisement processing to define, manage, and process dublists as part of their automated TrafficManager workflows.

Edit Decision List

A Vantage *edit decision list* (EDL) is a list of clips that will be merged together in a target clip. The list entries specify the start and stop of the clip, and Vantage supports list entries from multiple media files. Vantage operators use the Workflow Portal program to create EDLs.

Edit Service

The *Edit Service* executes the Playlist actions: [Colocate action](#), [Conform action](#), [Chronicle action](#), and [Compose action](#).

emotion Action

The emotion action is an optional, licensed feature in Vantage. The emotion action enables Vantage to utilize and interact with Emotion Systems Emotion Engine audio software.

Error Log

The Error Log utility captures Vantage errors and records the following details: date and time of error, error source (Vantage service), host computer where the error occurred, type of error (Info or Error), and error message.

Examine action

An *Examine action* uses the [Analysis Service](#) to evaluate the video and audio of a media file to measure certain characteristics, such as audio loudness, or to detect characteristics, such as the presence and size of curtains. You can configure it to publish metadata or variables containing the results of analysis.

Exist action

An *Exist action* uses the [Catalog Service](#), and allows you to determine if a [binder](#) of a given name (or name fragment) is present in a specified catalog.

Faspex Delivery action

A *Faspex Delivery action*, which is executed by the [Aspera Service](#), is used to deliver files to Aspera Faspex servers. Upon delivery, recipients are notified and can download the package.

FileCatalyst action

The *FileCatalyst action* is an optional, licensed feature, which enables Vantage workflows to access and deliver files to FileCatalyst servers via integrated FileCatalyst client software. It is executed by the [FileCatalyst Service](#).

FileCatalyst Service

The *FileCatalyst Service* implements the FileCatalyst action for Vantage.

Flip action

A *Flip action* is executed by the [Transcode Service](#), and implements the specified codec, which is used to transcode decoded digital baseband media into another media encoding format. The Telestream Media Transcode and Analysis Engine performs the transcode on behalf of Vantage. The Flip action has an Export command, which allows you to save the configured Flip action as an XML file, for use in SDK applications. This action is open workflow capable.

Forward action

A *Forward action*, which is implemented in every Vantage service, forwards a [binder](#) and all current variables to another workflow, starting a new [job](#) with the target workflow. A Forward action may be added to the end of a workflow, and requires that the target workflow have a [Receive action](#) as its first action.

Typically, workflows are created with a Receive action when they are intended for execution by another workflow that immediately precedes this one. This ability to chain workflows enables you to create comprehensive, intelligent run-time switching workflows consisting of smaller workflows used as building blocks.

See [Receive action](#).

Gather action

A *Gather action* is implemented by the [Staging Service](#), and collects one or more files from a specified server and directory (and optionally, its subfolders), and brings them into the workflow as attachments. Use of a file matching pattern allows you to select only certain types of files.

hot folder

A *hot folder* is a directory on a server that has been identified as a directory for storing media to be processed by a workflow in Vantage. When the workflow monitor identifies new media in this folder, it is submitted for processing.

Identify action

An *Identify action* uses the [Analysis Service](#) to determine certain properties of a media file, such as codec type, video bit rate, or file size. This information can then be published as a metadata labels or variables.

Inspector

An *inspector* is a series of one or more panels in Vantage Workflow Designer that facilitate the setup and configuration of a given action. Inspectors are unique to each action—for example, configuring a Watch action is very different than configuring a Flip action.

IPTV Flip action

The *IPTV Flip action* is included with the Cable / IPTV version of TrafficManager. IPTV Flip actions are executed by the [IPTV VOD Transcode Service](#) which can optionally run on a [Lightspeed Server](#) for GPU-enhanced x264/x265 encoding and video processing. The IPTV Flip action and IPTV VOD Service supports the features required to handle varying IPTV, set-top box and cable encoding requirements, and ancillary metadata specific to cable ad splicing and cable/IPTV set-top box environments. This action is open workflow capable.

IPTV VOD Transcode Service

The *IPTV VOD Transcode Service* is the Vantage component that executes the [IPTV Flip action](#). This service (which can optionally run on a [Lightspeed Server](#) for H264 and HEVC encoding and video processing), supports the features required to handle varying IPTV, set-top box and cable encoding requirements, and ancillary metadata specific to cable ad splicing and cable/IPTV set-top box environments.

job

A *job* is each execution of a Vantage workflow. Jobs have a state (separate from action states), and jobs are comprised of actions that are executing. Jobs, like actions, may be in-process or they may be complete.

As a job executes, each action may be performed by any service (on any computer) in the Vantage domain that is capable of performing it. The capability of a service to perform a specific job depends on its current operating state, its workload, and its suitability, defined by a [qualification rule](#).

Jobs for a given workflow can be viewed in the Vantage Workflow Designer by selecting the workflow in the Workflow Designer panel and displaying the Job Status tab. Alternatively, all in-process and failed jobs within a Vantage Domain may be viewed in the Status details panel of the Management Console.

Job Profile action

Use the *Job Profile action* (which is executed by the [Agility Service](#)) to submit jobs to Agility for processing; definition of the job is provided directly in Vantage by configuring the action.

Job XML action

Use the *Job XML action* (which is executed by the [Agility Service](#)) to submit jobs to Agility for processing; definition of the job is provided in an XML file.

job routing

See [qualification rule](#) and [run on rules](#).

job state

A *job state* is the current status of a job. Keyword values are In Process | Paused | Complete | Failed | Waiting | Stopped by User | Waiting to Retry.

Job Status Views Web Application

The *Vantage Job Status Views web application* is installed on a Vantage web server and enables you to view real-time information about jobs in the domain from anywhere on your network with a web browser.

label

A *label* or *metadata label* defines a set of metadata by use of name/value pairs associated with content. For example, a spot label may contain Agency, Author, or Ad-ID and other metadata values; this set of metadata is collectively called a Spot metadata label. Metadata labels can be stored in [binders](#) with the associated media and attachment files.

Vantage supplies a set of default metadata labels for use in workflows. In addition, you can create and modify labels for your use using the Management Console (Workflow Design Items > Metadata Labels).

license

A Vantage *license* is stored in the [Vantage domain database](#) and enables one or more Vantage features within a Vantage domain. Licenses are delivered as XML files and imported into the database and activated via the Vantage Management Console.

Lightspeed Server

A Vantage *Lightspeed Server* is a 1RU, GPU-enabled, multi-core CPU server used to host Vantage services and accelerate video processing and x264 transcoding. [Lightspeed Server](#) accelerates compute-intensive image processing, including scaling, deinterlacing, frame rate conversion, motion vector calculation, and other tasks that require computation and analysis to modify or create new video frames.

Live Services

Part of the Vantage Media Processing Platform on a Lightspeed Live Server, the Vantage Live Service is listed in the Management Console Services list and includes the Capture action. In total, there are four “Live” services on the Lightspeed Live server:

- The Telestream Live Persistence Service handles the persistence of source material.
- The Telestream Live Service corresponds to the Live Manager capability and arbitrates resource allocation for Lightspeed Live Capture.
- The Telestream Live Source service manages the acquisition of material from a specific source (spawned by the Telestream Live Service).
- The Vantage Live Service which includes the Capture action, depends on the three other services above to achieve the full functionality of the service.

Management Console

The *Management Console* enables Vantage system administrators to effectively configure Vantage domains, and scale domains across multiple servers to meet their operating requirements and perform effectively in their environment.

MedialInfo action

The *MedialInfo action*, which is executed by the [Analysis Service](#), performs 2 tasks, based on its analysis of the media file and its streams:

- Creates variables from properties, using the MedialInfo API

- Creates a report of the properties and their values.

In each category, you can produce variables of selected metrics with the results the analysis.

media nickname

A *media nickname* is an alias or alternate name that is assigned to a media file during Vantage workflow execution. When a media file is submitted to a workflow, the actual file name and location is stored in a Vantage [binder](#) along with a media nickname as defined in the workflow. Within the workflow, all references to a file are by media nickname. However, when Vantage needs to access a file, Vantage uses the actual file name and location stored in the binder.

See [attachment nickname](#) and [nickname](#).

MediaMate action

A *MediaMate action* uses the [MediaMate Service](#) to enable Vantage workflows to utilize and interact with the Subtitling capabilities of Screen MediaMate. Each subtitling option provides different capabilities that relate to the subtitle process.

Note: The MediaMate action is only supported on 64-bit Windows Server 2008.

MediaMate Service

The *MediaMate Service* implements the MediaMate Screen software for Vantage, and provides two-way communication between workflows (and the [MediaMate action](#)) utilizing the MediaMate Screen software itself.

Message action

A *Message action* is implemented in the [Communicate Service](#) and enables you to generate and transmit an electronic Message—an email, for example. A Vantage administrator must configure Vantage to use an SMTP server (Vantage Management Console: Settings & Options > Email) before email can be utilized.

Metadata Service

The *Metadata Service* is the Vantage component that executes the actions relating to the transformation of metadata between labels, variables, and XML files: [Populate action](#), and [Transform action](#).

Metric Service

The *Metric Service* gathers and supplies machine-level information about a specific Vantage node. It monitors CPU, network, and RAM utilization and reports these to Vantage. On a Lightspeed server, it also monitors the GPU activity. The bulk of the information that the Metric Service presents is visualized in the Machine Metrics section of the Vantage Console. By convention, a Metric Service should be installed and running on every node in a Vantage domain. If you do not have a Metric service running on a specific machine, then that machine will not appear (will not have an entry) in the Machine Metrics section of the Vantage Console.

Monitor Service

The *Monitor Service* is the Vantage component that executes [Watch actions](#) and [Associate actions](#), [Camera Ingest action](#) and the [Workorder action](#), all relating to the discovery of files and starting jobs.

Move action

A *Move action* is executed by the [Transport Service](#), and is used to move a file from a source target (file system/device and directory) to a destination target (file system/device and directory). It performs this task by copying the file to the destination, then deleting the source. The copy first, delete last process insures that the move completes normally before deleting the source file.

Move actions can be executed on any action state.

Multiscreen Flip action

Multiscreen Flip actions are an optional, licensed feature. Multiscreen Flip actions are executed by the [Multiscreen Service](#), which is used to perform adaptive bit-rate encoding and simultaneous packaging of decoded digital baseband media into multiple bit-rate variants of H.264/HEVC video and containers in adaptive rate streaming formats, including Adobe HDS, Apple HLS, Microsoft HSS, and players the support MPEG DASH. Transcoding is performed by the Telestream Media Transcode and Analysis Engine on behalf of Vantage. You can configure the Multiscreen action to perform transcoding on a standard Vantage server or on a [Lightspeed Server](#). This action is open workflow capable.

Multiscreen Service

The *Multiscreen Service* is the Vantage component that executes the [Multiscreen Flip action](#). This service (which can optionally run on a [Lightspeed Server](#) for H264 and HEVC encoding and video processing), supports the features required to handle varying adaptive bit-rate encoding and packaging requirements.

Nexidia Action

The Nexidia action is an optional, licensed feature in Vantage. It uses the [Nexidia Service](#) to interact with Nexidia QC servers running Nexidia QC software. The specified input files are passed to the Nexidia QC software where they are analyzed using the test profile selected.

Nexidia Service

The Nexidia service is an optional, licensed feature in Vantage. It executes Nexidia actions.

nickname

A *nickname* is an alias or alternate name that is assigned to a media or attachment file during Vantage workflow execution. When a media or attachment file is submitted to a workflow, the actual file name and location is stored in a Vantage [binder](#) along with a nickname as defined in the workflow. Within the workflow, all references to a file are by nickname. However, when Vantage needs to access a file, Vantage uses the actual file name and location stored in the binder.

Nicknames may refer to either media files or attachment files. Certain actions only allow the use of certain nickname types. For example, a Flip action only allows media file nicknames to be used as the inputs and outputs. However, other actions (such as the Move and Copy actions) operate on any type of file and allow the use of any nickname.

See [attachment nickname](#) and [media nickname](#).

Notify action

A *Notify action* is implemented in the [Communicate Service](#), and is an action which saves job information to a file to interface with an external system. You can configure a Notify action to produce an XML file, and you can also use it to invoke a Web Service.

TrafficManager-centric extensions are presented here for backward compatibility.

origin action

An *origin action* is a specific type of action, which must be used to start a workflow. A workflow without an origin action as its first action is not properly designed, and cannot be activated. The origin actions include the [Capture action](#), [Watch action](#), [Workorder action](#), and [Receive action](#), as well as the [Catch action](#) and [Dublist actions](#) (optional TrafficManager actions).

Original nickname

The media nickname *Original* is a reserved nickname that is typically assigned to media files in a workflow by the origin action.

See [media nickname](#).

Pipeline

Pipeline is a network-based video capture and playout device for moving SD & HD SDI video & audio in and out of MacOS X and Windows file-based workflows, with a wide variety of industry-standard encoders.

Populate action

A *Populate action* uses the [Metadata Service](#) to read and write metadata labels. During ingest, metadata labels can be added to ingested media and generally include trim information, audio levels, file properties, and commercial metadata. The metadata labels can then be reviewed and modified by operators using Workflow Portal. At any stage of a workflow, Vantage can extract information from labels using the Populate action, allowing Vantage for example to use trim points during a transcode, or audio level information when creating the final broadcast asset. This action is open workflow capable.

Post Producer

Post Producer is a specially-licensed set of actions and functionality in Vantage that enables iterative, template-driven assembly and encoding of assets for publication. Post Producer workflows automate assembly and reduce production costs by producing multi-layer video deliverables with transition and image effects, graphic overlays, and conformed for IPTV and cable VOD production, news or weather updates, international localization, promo assembly and insertion and advertisement insertion.

Process MMF action

A *Process MMF action* (which is executed by the [Agility Service](#)) processes an attachment as an MMF file and generates variables from it.

Pulsar Action

The Pulsar action is an optional, licensed feature which enables broadcasters to integrate the Pulsar suite of content verification components directly in Vantage workflows. It is executed by the [Pulsar Service](#).

Pulsar Service

The Pulsar service implements the Pulsar action for Vantage.

QC action

A *QC action*, which is executed by the [Analysis Service](#), enables you to perform analysis on media using a variety of analysis tools, and optionally, produce a report of the analysis. The QC action is similar to the [Analyze action](#), with additional features in addition to generating variables for each property.

In each tool, you can test various properties for True/False, min/max values, allowable values, or ranges, and then set pass/fail and other variables based on the results of the analysis. You can use these variables in downstream actions.

qualification rule

A *qualification rule* influences or controls the routing and execution of actions among Vantage services of the same type in a distributed Vantage domain. Qualification rules can be used to ensure that jobs are routed to services that are best suited for the task. Vantage uses values contained in variables to determine the suitability of a given service to execute the action.

Qualification rules are exclusively based on variables; they are not based on any actual machine analysis. As a result, it is up to the system administrator to correctly set up variables and qualification rules, and apply variables to the appropriate actions to ensure that jobs are routed correctly.

Qualification rules are created and managed in the Vantage Management Console: Services.

See also [run on rules](#).

Receive action

A *Receive action* is an [origin action](#) which is implemented in every Vantage service. Receive actions are designed to receive files from other systems: workflows, SDK-based applications, and Workflow Portal, for example. Files can also be automatically submitted to a workflow starting with a Receive action from another workflow using the Forward action.

See [Forward action](#).

Register action

A *Register action* uses the [Catalog Service](#) to add the [binder](#) created by each job to a Vantage catalog. Register actions can be executed on any action state.

See also [Vantage catalog](#).

Remove action

A *Remove action* is executed by the [Catalog Service](#), and is used to permanently remove a binder from the catalog and set the associated file resources to expired. If the action succeeds, it emits an action state of Success; otherwise, Failure.

Report action

A *Report action*, which is executed by the [Analysis Service](#), generates a list of variables and their values and saves them in a file format specified by you.

resource cost

A *resource cost* is an integer value, implemented in the Vantage Management Console on each action type to specify a relative computer resource consumption value in relation to all other action types. This value enables Vantage to maximize resources and optimize transactions, so that you can tune your Vantage system for the highest possible throughput on your particular hardware.

retry rules

Retry rules are rules that you can specify on certain actions, to re-execute actions that fail primarily due to platform access and network latency problems. The retry rules you set on a given action override the default retry rules established in the Management Console.

run on rules

Run on rules are rules that you specify on a given action, to qualify which services have the characteristics that enable them to execute this action. Rules are set up by specifying variables which have been bound to a given Vantage service and values set. After configuration, the action can test each rule by comparing its run time value to the value in the service's copy and determine if there is a match before attempting to execute it.

See also [qualification rule](#).

SDK Service

The *SDK Service* is the Vantage component which enables integration with third-party or custom-developed client programs, for submitting jobs, tracking status, etc.

Session Log

The session log is a function of the Job Status and Domain Job Status panels in the Workflow Designer. This log displays session activity entries, if any, including which variables have been provided to each action and which ComponentPac was used to run an action. This information can be helpful when debugging the use of variable, or when working on an issue with Telestream Customer Service.

Signiant Delivery action

A *Signiant Delivery action*, which is executed by the [Signiant Service](#), is used to deliver files to servers controlled by Signiant file transfer products.

Signiant Service

The *Signiant Service* is the Vantage component which enables integration with third-party or custom-developed client programs, for submitting jobs, tracking status, etc.

The *Signiant Service* implements the Signiant file transfer product for Vantage, and provides two-way communication between workflows (and the [Signiant Delivery action](#)) utilizing the Signiant software itself.

Staging Service

The *Staging Service* is the Vantage component which executes [Archive actions](#) and [Gather actions](#).

service

See [Vantage services](#).

Secured Version Control

The Secured Version Control feature provides the ability to install the latest software and begin building workflows that utilize new ComponentPac libraries (software libraries), while keeping the existing workflows untouched and operating off a previous ComponentPac version. When the user desires to upgrade a workflow or action within a workflow, it can be done at a convenient time. For a detailed description of Secured Version Control, search the *Vantage Domain Management Guide*.

Synchronize action

A *Synchronize action* is a connector action, for the sole purpose of uncluttering workflow connectors. In workflows where there is a many-to-many relationship (for example, 6 Flip actions connecting to 6 Deploy actions, which connect to 6 Deletes), instead of drawing connection between them all, you simply connect them to a common Synchronize action. There is no [Inspector](#) for the Synchronize action, because no configuration is required.

Syndicate Action

The Syndicate action processes and can apply a template to metadata accompanying syndicated content from providers like Pitchblue and generic providers. It is executed by the [Traffic Service](#). The purpose of this is to automatically rearrange segments according to the template, or to mark specific segments as “not included” in the final program. Use the Syndicate action in syndicated media ingest workflows to convert sidecar metadata XML files to a mezzanine format for use in downstream actions in the workflow, or for use in Syndication Workflow Portal applications. The Syndicate action is part of TrafficManager, an optional, licensed feature of Vantage.

Telestream Cloud Service

The *Telestream Cloud Service* is the Vantage component which executes the *Telestream Cloud Flip* action.

Timed Text Flip action

A *Timed Text Flip action* is part of the Timed Text group. It is executed by the [Timed Text Service](#). The Timed Text action is executed by the Timed Text service. The Timed Text Flip action automates caption file-type conversions, extracts caption data from media with embedded captions, creates subtitle overlay graphics, and manipulates the timecode of caption data to match media.

Timed Text Service

The *Timed Text Service* is the Vantage component which executes the [Timed Text Flip action](#).

Tempo action

A *Tempo action* is part of the Edit group. All actions in the Edit group are executed by the [Edit Service](#). The Tempo action is included in Tempo, a time-adjusting encoding solution built on the Vantage platform. The Tempo action uses the Edit Service for re-timing file-based content and intelligently decreasing or increasing the running time of shows and segments. This action is open workflow capable.

Traffic Service

The *Traffic Service* is the Vantage component which executes the [Catch action](#) and [Dublist action](#).

TrafficManager

TrafficManager is an optional, licensed feature which enables automated advertisement and syndicated media processing from catch server to automation systems and on-air servers, serving both the broadcast and cable industry. It includes the [Catch action](#) for catch servers and the [Dublist action](#) for dublist management. It also includes the [Syndicate Action](#) for processing syndicated media.

transcode

Transcode means the process of decoding media in one format (MPEG2, for example) down to digital baseband and then encoding it in another media format (MPEG4, for example).

Transcode Service

The *Transcode Service* is the Vantage component that executes the [Flip action](#)—transforming media from one format to another. Transcoding for the Flip action is performed by the Telestream Media Transcode and Analysis Engine on behalf of Vantage.

Transform action

A *Transform action* uses the [Metadata Service](#) to transform metadata between XML files (attachments) and labels. XSL style sheets are used to perform these transformations; style sheets can be managed in the Vantage Management Console: Workflow Design Items > Style Sheets. This action is open workflow capable.

Transport Service

The *Transport Service* is the Vantage component that executes the actions relating to file operations: [Move action](#), [Delete action](#), [Copy action](#), and [Deploy action](#).

Vantage array

A *Vantage array* is a domain whose software components are distributed among multiple computers for durability and scalability, instead of installed and operating on a single computer (often referred to as a distributed domain). A typical array has the [Vantage domain database](#) installed on a dedicated server, and all Vantage services installed on another computer, and additional Transcode services each installed on other computers for high-performance, parallel transcoding.

Vantage catalog

Formal name for catalog. Similar in concept to the folders in a file system, a *Vantage catalog* is a container that stores [binders](#). *Catalog folders* are sub-containers that organize binders. To access a binder, Workflow Portal operators search through the visible catalogs and folders, just as they might sort through folders in a file system.

Vantage Cloud Manager

The *Vantage Cloud Manager* enables Vantage system administrators to effectively configure cloud service provider accounts, start, stop, and configure domains, and monitor domain status.

Vantage domain database

A *Vantage domain database* is a Microsoft SQL Server database which contains all workflows, actions, [jobs](#), [binders](#), licenses, and configuration information for a Vantage domain.

Vantage domain

A *Vantage domain* is a collection of computers, Vantage workflows, actions, Vantage services, [jobs](#), [binders](#), and configuration settings, all known to and interacting with each other, stored in a [database](#). This collection constitutes a Vantage domain. Vantage domains may exist on a single computer or they may be distributed across many computers for durability and scalability.

The name of a Vantage domain is the same as the name of the server that hosts the [Vantage domain database](#).

Multiple Vantage domains may exist on a network, but they are independent entities that do not communicate with each other. They are not bound together and do not share resources or work. The purpose of storing an entire domain in a [database](#) is to provide an easy way to create and manage the domain and to provide access to all the details about each resource in the domain to any other resource that needs it.

Vantage EDL nickname

The nickname *Vantage EDL* is a reserved nickname that is typically assigned to media files that are created in catalog ingest workflows, to identify the ingest files of an [Edit Decision List](#) in Workflow Portal, during Stitch and Trim operations. See [media nickname](#).

Vantage folder address

A *Vantage folder address* is an alias to a local or remote file folder. You can create and manage Vantage folder addresses in the Vantage Folder Address Book dialog, in Copy and Move actions in Vantage Workflow Designer, and in the Vantage Management Console.

After you create a Vantage folder address, you can specify the destination directory in any workflow simply by selecting the Vantage folder address. Changes to a Vantage folder address—such as updating an IP address or a password—immediately affect all workflows that use that Vantage folder.

Unlike Vantage stores, temporary files that are created during workflow execution are not automatically deleted from Vantage folders according to [job](#) expiration settings.

Vantage Proxy nickname

The media nickname *Vantage Proxy* is a reserved nickname that may be assigned to media files encoded using the QuickTime encoder in H.264/AAC as QuickTime movies or MP4 files with x264/AAC, which enables previewing with the media viewers provided in Vantage programs such as Workflow Designer, Workflow Portal, and the Vantage Management Console.

Alternatively, the Workflow Portal Windows Client QuickTime Media Player supports MP4 with x264-encoded H.264/AAC, provided that QuickTime 7.7.6 or later is installed.

See [media nickname](#).

Vantage services

The term *Vantage services* refers to the collection of Windows services in a Vantage domain, which are responsible for executing all of the actions in a workflow as it executes.

Vantage store

A *Vantage store* is a directory on a Windows file system that stores temporary files. Stores are managed by the Vantage domain for the purpose of centralizing large directories for reading and writing files. Unlike a Vantage folder, temporary files placed in a Vantage store are deleted when the [binder](#) is deleted. Vantage stores are generally used to hold temporary files for the duration that a [job](#) is executing.

Vantage stores are managed in the Vantage Management Console: Storage. Services that create temporary files, such as the Transcode Service, can be configured to use specific stores.

Vantage Thumbnail nickname

The media nickname *Vantage Thumbnail* is a reserved nickname that is typically assigned to output media files that are created to display thumbnail images instead of [binder](#) names in Vantage programs such as Workflow Portal.

See [media nickname](#).

variable

In Vantage, a *variable* is a container for temporary [job](#) information—a symbolic name (or identifier) which contains some known or unknown quantity or element of information; a value. You use the variable name to reference the current value; this separation of name and content allows the name to

be used independently of the exact information it represents. The variable can be bound to a value (that is, you can set a variable to a given value) during run time, and the value of the variable may change during the course of workflow execution.

A variable identifies temporary job metadata. Variables have a name (such as *Number of Audio Channels*), a type (such as *Integer Number*) and a default value (such as *50*). Variables values can be set inside a job in a variety of ways: through analysis, through metadata population, in the Watch and Associate actions, as a property of an action, or by a service as it executes an action.

Variables are used by Vantage services and actions to control workflow execution. Many settings in actions can be bound (or attached) to variables, allowing the workflow to dynamically update values on a job-by-job basis.

For example, a variable may be assigned a value by an Analysis action to determine how many lines of black are at the top of a video frame; a crop filter later in the workflow can bind to that variable, ensuring that every crop in every job is appropriate to the workflow requirements.

Variables in services may be also be used for job routing. For example, an action with a `FibreRequired=TRUE` variable must pass this condition to a service which evaluates the condition to determine if it can successfully perform the action.

Variables can be created in Vantage Management Console (Workflow Design Items > Variables) or in Vantage Workflow Designer, and assigned for use in workflows and services.

VidChecker action

A *VidChecker action* is an optional, licensed feature in Vantage. It uses the [VidChecker Service](#) to enable Vantage workflows to utilize and interact with various QC tests provided by the VidChecker software.

VidChecker Service

The *VidChecker Service* implements the VidChecker QC software for Vantage, and provides two-way communication between workflows (and the [VidChecker action](#) actions) utilizing the VidChecker software itself.

Watch action

A *Watch action* is an [origin action](#); it uses the [Monitor Service](#) to regularly poll a target location (a directory, for example) on a device or file system (FTP, Windows network folder, etc.) to discover new files. This action is open workflow capable.

When a new file is discovered, the Watch action submits a [job](#) for the workflow which it is part of, for processing the file—typically, a media file.

Web Dashboard

The *Web Dashboard* is an optional, licensed web app which displays important domain information from anywhere on your network in a web browser. The Web Dashboard is installed on the IIS server on your [Vantage domain database](#) server.

workflow

A *workflow* in Vantage is a set of actions designed to perform an automated process. Vantage workflows are created using the Vantage Workflow Designer by adding and configuring actions and connecting them together. Workflows are stored in the [Vantage domain database](#), and executed by Vantage services.

Workflow Designer

Vantage Workflow Designer is a client program that enables you to create and edit workflows, activate and deactivate workflows, monitor [job](#) status, and review and delete jobs that have completed.

Workflow Portal

Workflow Portal is a client program that features a customizable set of functionality to support various operator-related tasks: selecting media and submitting [jobs](#), updating variables and metadata, forwarding jobs, creating EDL-based jobs, etc.

Customization is implemented in the Vantage Management Console, when Vantage administrators construct the user interface and functionality they want for a given task, then save it. When operators launch Workflow Portal, they select the configuration appropriate to the task at hand, and Workflow Portal dynamically display the user interface components specified in the configuration file.

Workflow Portal Web Application

The *Workflow Portal web app* is a limited implementation of Workflow Portal, for use in a web browser over a network or Internet connection.

Workorder action

A *Workorder action* is an [origin action](#); it uses the [Monitor Service](#) to regularly poll a target Windows directory for new [workorder files](#) to process. The Workorder action provides a simple and highly effective method of submitting multiple similar jobs without using the SDK.

When a new file is discovered, the Workorder action submits one job for each row in the file.

workorder file

A *workorder file* is a comma-separated value (CSV) text file containing one or more work orders, or job descriptions. Each row in the CSV file specifies a job, and each column specifies either an input file for the job, or value for run-time use; typically assigned to a variable in the workflow. Workorder file configurations are specified in the Domain Management Console. At least one workorder scheme must be created in order to use a Workorder action.

