

Installing and Using Vantage AudioTools

This App Note
applies to
Vantage
Versions
6.3 - 7.1
and later

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

Synopsis

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.

Requirements

The Vantage AudioTools Connector is available in Vantage 6.3, 7.0, 7.1, and later. If you do not currently have Vantage 6.3 or later, download the latest version from www.telestream.net and request a license that includes the Vantage AudioTools Connector from Telestream.

Hardware and OS

Vantage System

- Compatible server hardware as described in the *Vantage Domain Management Guide*.
- Windows Server 2008 R2, 2012 R2, or Server 2016 (for Vantage 7.0 UP2 and later).

Note: Support for Windows Server 2008 ended on December 31, 2017. Telestream recommends using Windows Server 2012 or 2016.

Minnetonka AudioTools System

- See the Minnetonka AudioTools software requirements

Software

- For the Vantage 7.0 or earlier AudioTools Connector, Minnetonka AudioTools Server 3.0 is required. For the Vantage 7.1 or later AudioTools Connector, AudioTools 4.0 is required. Vantage 7.1 was tested successfully with version 4.0.138. (Contact Minnetonka to obtain the v4.0 update.)
- Vantage 6.3 to 7.1, or later:
 - For Vantage 6.3 the AudioTools Connector is installed through a separate Vantage AudioTools Connector patch installer.
 - For Vantage 7.0 - 7.1 the Vantage AudioTools Connector is installed directly from the Vantage Installer's Custom Install option (see instructions below).

Licensing

- Both the Vantage AudioTools Connector and Minnetonka AudioTools software require separate licensing.
- The Vantage AudioTools Connector is licensed through the Vantage option V-AUDIOTOOLS-CONN with the policy name of “Minnetonka AudioTools QC-4.” Each instance can process up to 4 actions at a time. Contact Telestream for licensing details.
- Minnetonka AudioTools software must be purchased and licensed directly from Minnetonka or an authorized Minnetonka reseller.

Limitations

- The Vantage 6.3-7.0 AudioTools Connector requires Minnetonka AudioTools Server 3.0, which is not forward-compatible with Vantage versions 7.1 and later.
- The Vantage 7.1 AudioTools Connector requires Minnetonka AudioTools Server 4.0, which is not backwards compatible. (Contact Minnetonka to obtain the 4.0 update.)
- Custom Workflows can be obtained through Minnetonka or an authorized Minnetonka dealer/reseller.
- The number of concurrent Vantage AudioTools sessions varies depending on options purchased (see the part numbers above).

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

Features

Comprehensive Loudness Control

Loudness control requirements vary from country to country. By combining AudioTools Server with Telestream Vantage, broadcasters and content producers can now adjust additional loudness parameters, including adjustment of theatrical content for broadcast and VOD/OTT. ATS also provides processing for controlling dynamics, enhancing dialogue intelligibility, or automating all of the above using conditional automation. Complete R 128, A/85, and other Loudness Control standards along with Maximum Short Term and Maximum Momentary Limiting are available, as well as archiving of before/after loudness measurements. AudioTools Server measures, and simultaneously adjusts momentary, short term and program loudness, along with loudness range and maximum true peak levels.

- Supports EBU R 128, CALM Act, DPP and other international loudness specifications
- Best in class, comprehensive, standards-based measurement, processing and control of loudness
- Adaptation of highly dynamic or theatrical content for broadcast
- Focused functionality for processing only audio
- Easy integration with existing automated Telestream video workflows
- Faster than real time operation
- Flexible, extensible XML job-ready automation
- Handles multiple delivery formats, including PCM & Dolby E
- Flexible container handling of MXF and QuickTime files by Vantage sending audio only, or pointing AudioTools Server to the file for extraction and wrapping
- Logging and reporting insures documented compliance
- **Dolby E Automation**—Automated Dolby E encoding and decoding. Dolby E quality control, including correction and metadata handling.
- **Audio Conforming**—Automated adaptation of audio content to specific output specifications, including Movie Adaptation and standards-based loudness compliance.
- **Quality Control**—Audio specific quality control of pure audio or container formats, including channel assignment detection and correlation check.
- **Other use cases**—Other use cases include automated channel assignment detection based on the audio content, pitch shift and time twist, a frame rate toolbox, channel management, various watermarking technologies, audio restoration and many more. Unlimited individual profiles are possible. AudioTools Server also supports industry standard external audio plug-ins. These plug-ins (VST) can be used via a flexible XML scripting language.

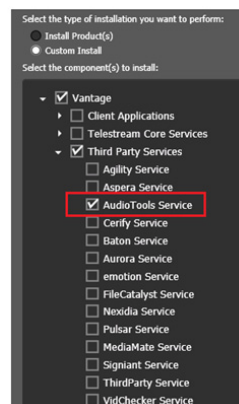
Minnetonka Integration with Vantage

This option should be considered by any Vantage customer who needs enterprise-level file-based audio management and processing.

Note: Telestream does not resell Minnetonka software. Telestream sells a connector (Vantage AudioTools Connector) for integrating Minnetonka. The Minnetonka software and instructions for installing it can be obtained from Minnetonka or an authorized Minnetonka reseller/dealer.

Follow these steps to enable the AudioTools service and connector on a Vantage system:

1. If you do not currently have Vantage 6.3 or later, download it from www.telestream.net and obtain a license from Telestream that includes the Vantage AudioTools Connector.
2. If you already have Vantage 6.3 or later, obtain a license from Telestream that includes the Vantage Audiotoools Connector.
3. Install Vantage's Audiotoools Connector as follows:
 - a. Vantage 6.3:** If your system is running Vantage 6.3, you will install the Vantage AudioTools Connector through a separate Vantage AudioTools Connector patch installer that is available on the Vantage download page.
 - Log onto the Vantage download site at <http://dynamic.telestream.net/downloads/download-vantage.asp?prodid=vantage>
 - From the *Previous Versions* drop-down menu, select *Vantage 6.3*.
 - On the Vantage 6.3 download page, navigate to the *Updates* tab.
 - From the Vantage Partner Integration Updates section download the Minnetonka patch installer.
 - Run this installer on your AudioTools server(s).
 - b. Vantage 7.0 - 7.1 or later:** If your system is running Vantage 7.0 - 7.1, you will install the Vantage AudioTools Connector on your AudioTools server(s) directly through the Vantage installer's *Array Custom Install* option (not the *Single Node install* option). Select only the Audiotoools Service, and deselect everything else (as shown below).



Note: If you are upgrading Vantage 7.0 to 7.1, you must first remove 7.0 before installing 7.1.

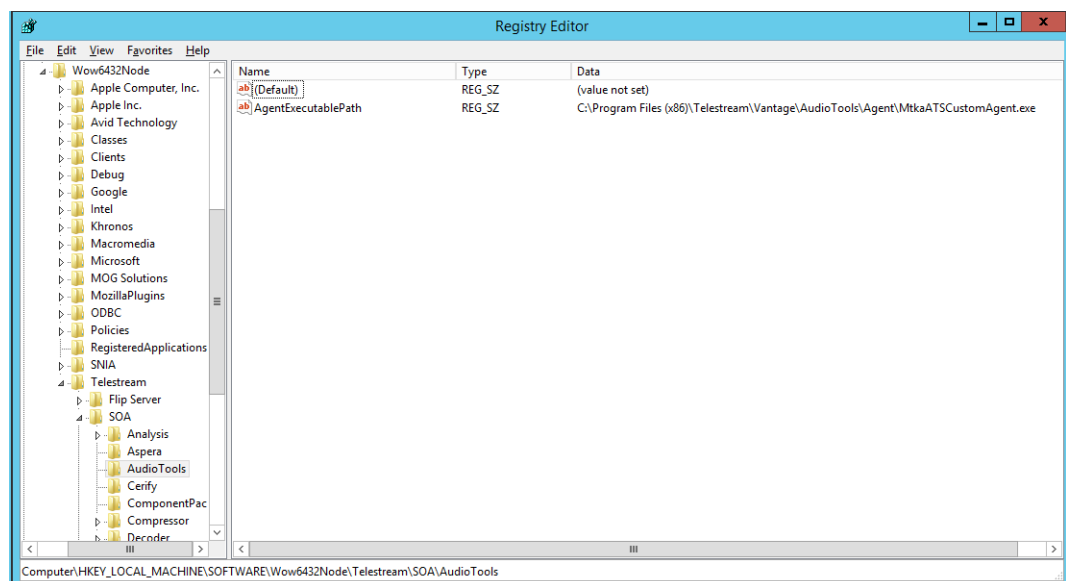
For details about using the Vantage installer, see the [Vantage Domain Management/Installation Guide](#).

Integration Troubleshooting

If you installed Vantage 7.1 on top of Vantage 7.0 without uninstalling Vantage 7.0 first, third party services such as AudioTools may get stuck in maintenance mode or may not function at all.

To correct this issue, the following registry setting(s) must be applied to the server hosting the corresponding third party Vantage service(s). After a registry setting is applied, the corresponding service must be restarted.

- Create the Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Telestream\SOA\AudioTools
- Create the String Value:
"AgentExecutablePath"="C:\Program Files (x86)\Telestream\Vantage\AudioTools\Agent\MtkaATSCustomAgent.exe"
- Create the Data value:
C:\Program Files (x86)\Telestream\Vantage\AudioTools\Agent\AgentExecutable.exe



Telestream Support can help you with this procedure if you are unfamiliar with editing the registry. See [Obtaining Support](#) later in this document for contact information.

Integration Examples

The following examples show how to integrate Vantage and Minnetonka AudioTools.

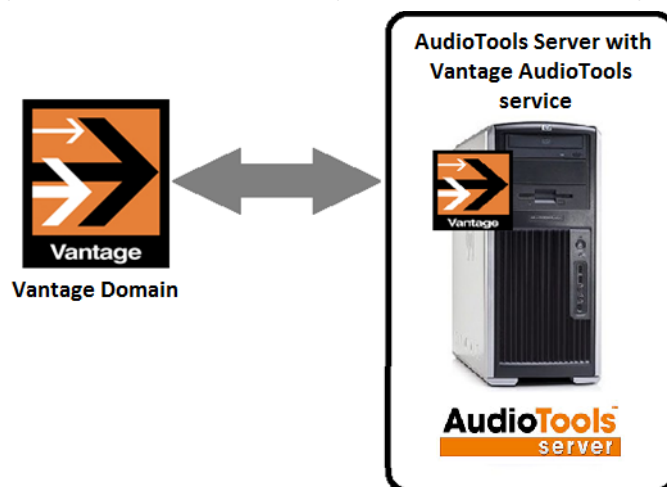
Example 1—Vantage and AudioTools as Single Nodes

Figure 1 shows the AudioTools Server and Telestream Vantage installed on separate servers. Follow these steps and refer to Figure 1 to create this configuration:

1. Install a Vantage domain with all appropriate Vantage services licensed and actively running on a server separate from the AudioTools server.
 Configuring Vantage licensing and services is described in the [Vantage Domain Management Guide](#), which is available at Telestream.net and from the Help menu of the Vantage Management Console.
2. Create a separate AudioTools server or servers according to the instructions from Minnetonka.
3. Install the Vantage AudioTools Connector on the AudioTools servers following the instructions in the previous topic, [Minnetonka Integration with Vantage](#).
4. Add the node(s) running the Vantage AudioTools Connector as members of the Vantage domain (see the [Vantage Domain Management Guide](#) for details). License each AudioTools server for the AudioTools Connector.
5. On the Vantage server, share the Vantage default store and the location of files passed to an AudioTools action to allow all servers in the domain (i.e. AudioTools server) access to them.

Connectivity to the shared locations within the Vantage domain can be 1Gb Ethernet, 10 Gb Ethernet, Fibre or any other appropriate protocol. Connectivity to shared media files can become a bottleneck if throughput is limited, so design your Vantage/AudioTools system with maximum shared access in mind.

Figure 1. Example 1—Vantage and AudioTools as Single Nodes

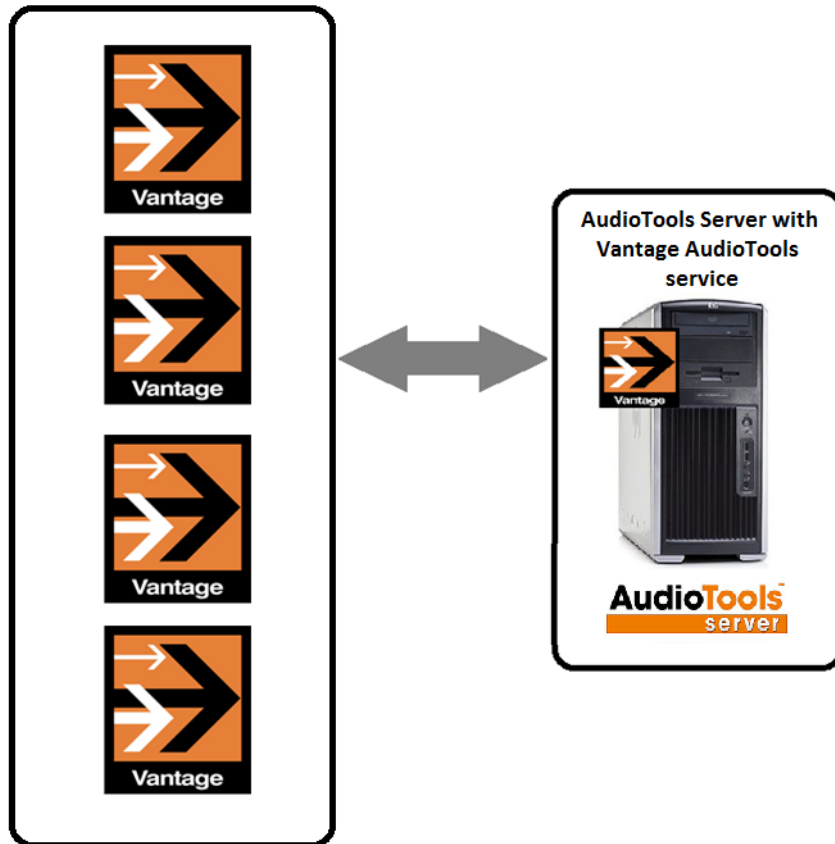


Example 2—Vantage Array and a Single Node AudioTools Server

Figure 2 shows a single AudioTools server and Telestream Vantage installed as a Vantage Array (multiple Vantage servers).

Follow the installation instructions from Example 1.

Figure 2. Example 2—Vantage Array and a Single Node AudioTools Server

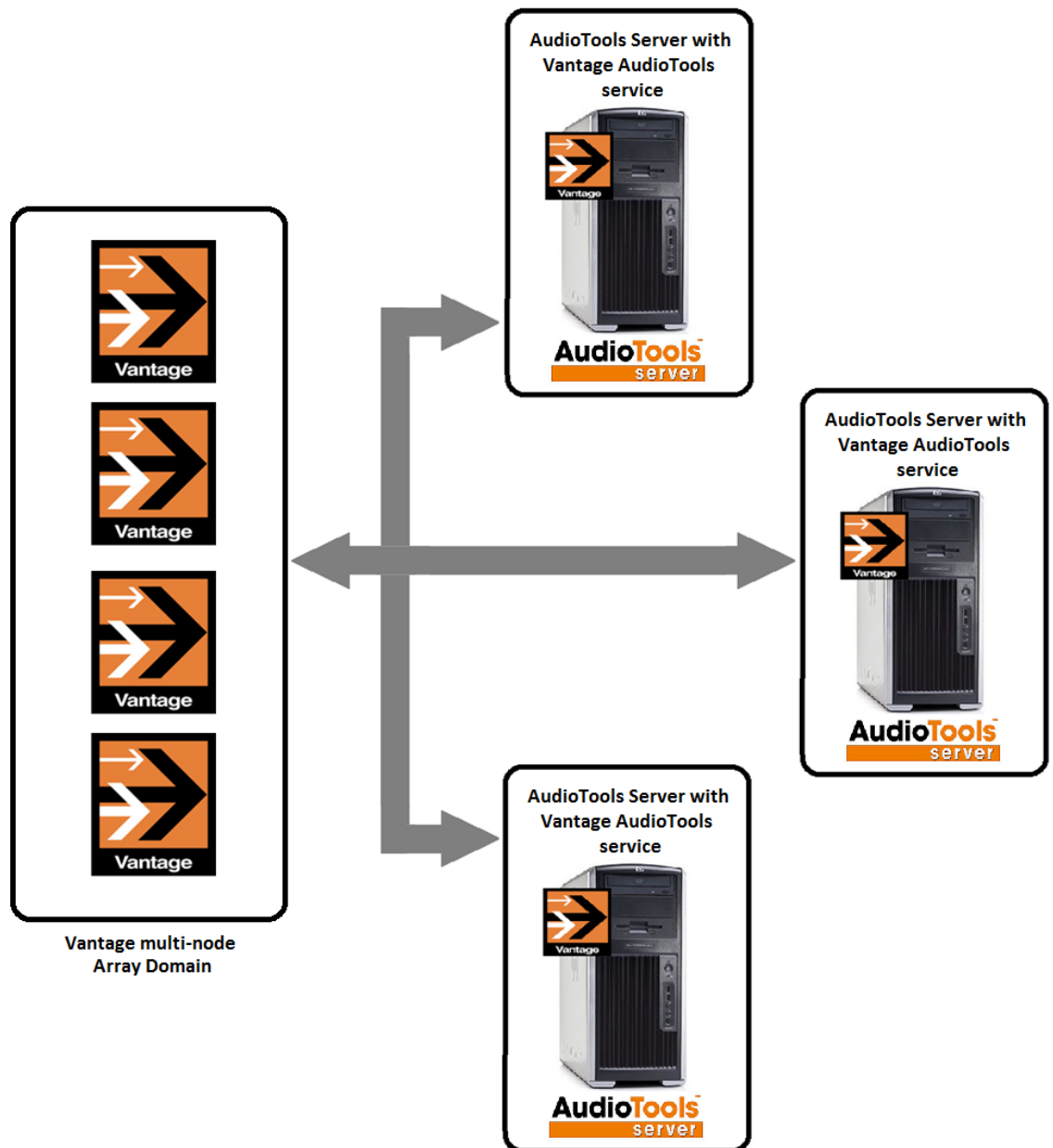


Example 3—Vantage Array with Load Balancing and Multi-Node AudioTools Servers

Figure 3 shows multiple AudioTools servers and Telestream Vantage installed as a Vantage Array with Load Balancing. See the [Vantage Domain Management Guide](#) for details about configuring Load Balancing.

Follow the installation instructions from Example 1.

Figure 3. Example 3—Vantage Array with Load Balancing and Multi-Node AudioTools Servers



Example Workflows

Vantage and AudioTools Server (ATS) are installed as two separate and complete products. The AudioTools Connector for Vantage combines the full functionality of both Vantage and ATS— and offers two ways of operating ATS directly from within Vantage Workflow Designer.

Figure 4. Two Ways to Access AudioTools

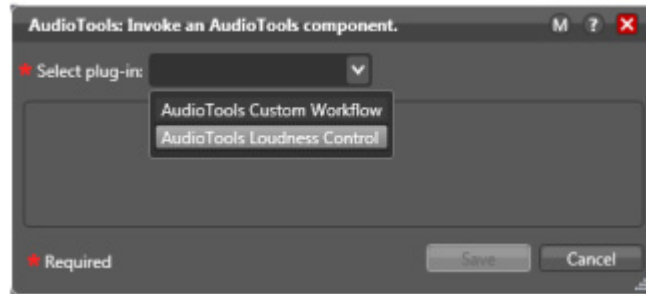


Figure 4 shows the two ways that the Vantage AudioTools Connector can operate ATS directly from within Vantage Workflow Designer. Both are available from the AudioTools Action Inspector drop down menu:

- a. Select AudioTools Loudness Control to invoke the Loudness Agent. This allows for the most typical loudness processes, including hitting multiple target parameters using an iterative processing pass from a simple user interface. Users select Loudness Adjustment Types and enter target requirements for various loudness parameters. These parameters are used to configure a predefined master workflow profile using the Loudness Measurement and Loudness Adjustment modules on AudioTools Server.
- b. Select AudioTools Custom Workflow to invoke the Generic Agent. This Agent operates without a user interface. The user simply chooses any custom predefined AudioTools Server workflow currently available. This allows for every possible profile on AudioTools Server to be used from within Vantage.

Note: No Custom Workflows are available by default. Custom Workflows can be obtained separately through Minnetonka or an authorized Minnetonka dealer/reseller. An AudioTools Server consultant can assist broadcasters to translate requirements into custom workflows.

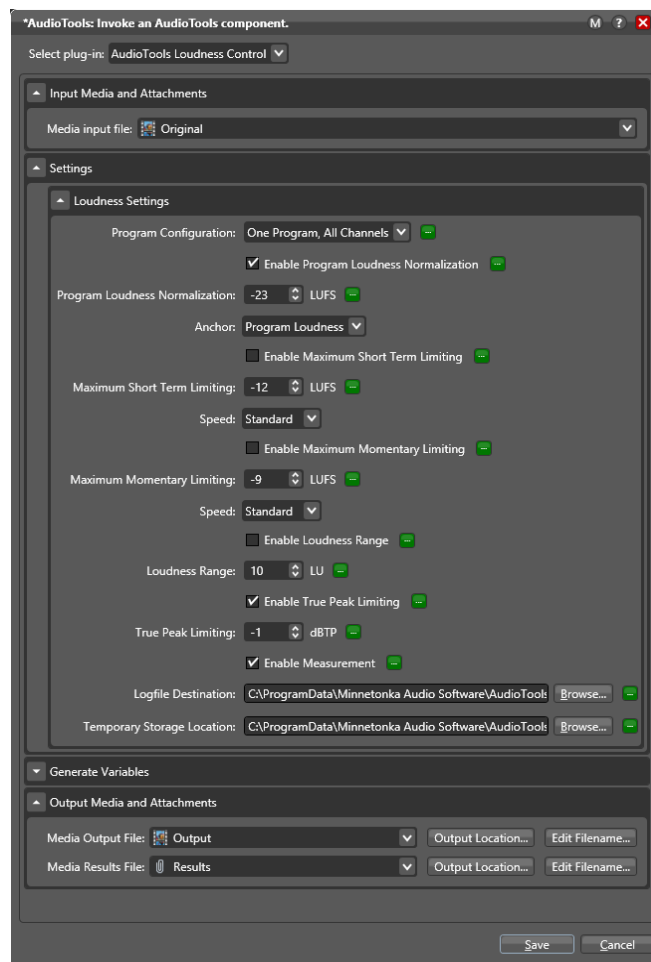
The two ways to configure the Vantage AudioTools Connector are described below.

Configuring for Loudness Control

Follow these steps and refer to [Figure 5](#) to configure the AudioTools action:

1. Create a Vantage workflow.
2. Click and drag the AudioTools action into the workflow.
3. Click the "i" in the upper left corner of the action to open the Inspector.
4. From the Select plug-in drop-down menu, select AudioTools Loudness Control.
5. Select a Media input file nickname.
6. Select the appropriate Loudness configuration parameters from Loudness Settings.
7. Select Generate Variables, enable desired variables, and specify their values.
8. Select the Media Output File and Media Results File nicknames/output locations.
9. Click Save to save your settings.
10. Activate the workflow. When the workflow runs, it invokes Loudness Control based on the configured loudness limiting and outputs the resulting files to the locations you specified.

Figure 5. Configuring for Loudness Control



Configuring for a Custom Workflow

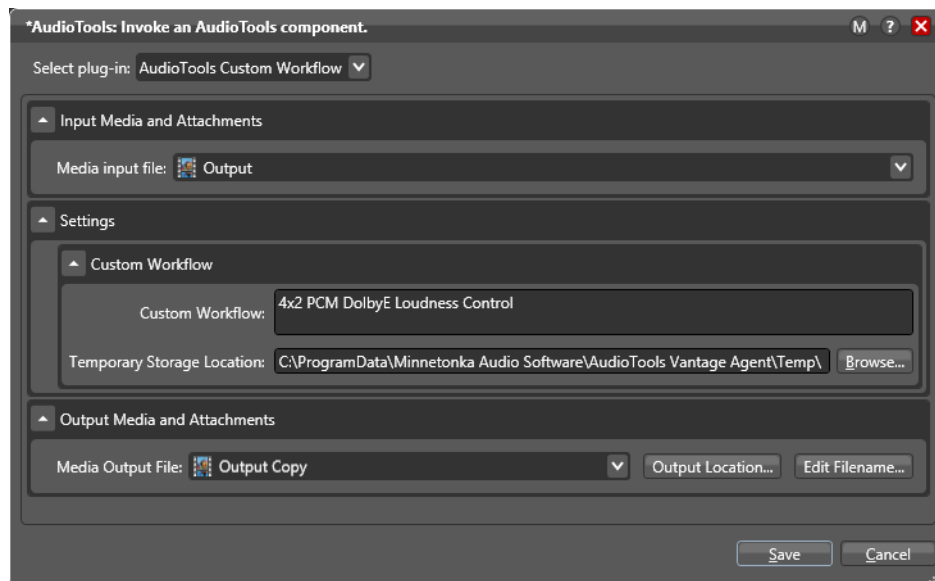
Follow these steps and refer to [Figure 6](#) to configure the AudioTools action for a custom workflow:

1. Create a Vantage workflow.
2. Click and drag the AudioTools action into the workflow.
3. Click the "i" in the upper left corner of the action to open the Inspector.
4. From the Select plug-in drop-down menu, select AudioTools Custom Workflow.
5. Select a Media input file nickname, the desired workflow from the Custom Workflow drop-down menu and the nicknames/output location for the Media Output File.

Note: No Custom Workflows are available by default. Custom Workflows can be obtained separately through Minnetonka or an authorized Minnetonka dealer/reseller. An AudioTools Server consultant can assist broadcasters to translate requirements into custom workflows.

6. Click Save to save your settings.
7. Activate the workflow. When the workflow runs, it invokes the selected Custom Workflow and outputs a Media file to the locations you specified.

Figure 6. Configuring a Custom Workflow



Configuring Shared File and Folder Access

The configuration of a system running Vantage and AudioTools Server software requires shared access to source/output media and results file folder locations. Vantage storage locations, the location of media files being passed to the AudioTools action and all output file locations must be shared in a way to allow all processes in the domain (i.e. Vantage and AudioTools servers) access to them. Follow the guidelines contained in the Vantage Domain Management Guide (<http://www.telestream.net/telestream-support/vantage/support.htm>) to configure your Vantage/AudioTools system for shared file access.

Connectivity to the shared locations within the Vantage/AudioTools domain can be 1Gb Ethernet, 10Gb Ethernet, Fibre or any other appropriate protocol. Be aware that connectivity to shared media files can become a bottleneck if throughput is limited. Design your Vantage/AudioTools system with maximum shared access in mind.

Obtaining Support

Telestream support staff will be the first line for supporting the Vantage AudioTools Connector's action controls and interaction with AudioTools Server software. If our support staff determines that the support needs are directly associated with the AudioTools agent or AudioTools Server software, Telestream will connect the customer to Minnetonka support directly.

For AudioTools Custom Workflows support, contact Minnetonka directly.

Telestream support

<http://www.telestream.net/telestream-support/vantage/contact-support.htm>

Email: support@telestream.net

Phone Support:

- Americas - 877-257-6245 (U.S.); +1.530-470-2036 (if calling outside the U.S.)
- EMEA and APAC - +49 228 280 9141 or +1 530-470-2036

See Telestream's Maintenance and Support Guide for more details:

<http://www.telestream.net/pdfs/datasheets/Telestream-Enterprise-M&S-Guide.pdf>

Minnetonka support

<http://www.minnetonkaaudio.com/support>

Email: atssupport@minnetonkaaudio.com

AudioTools Server Phone Support:

- US: +1 (952) 449-6481
- International: +49 2162 1062624

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