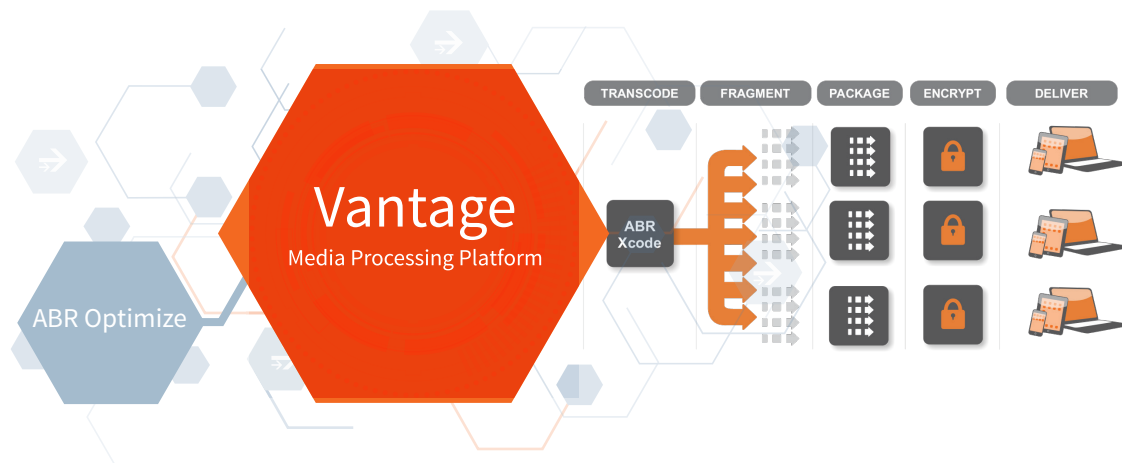


Vantage ABR Optimize

Product Sheet



ABR Optimize for Vantage Constant Quality Bandwidth Optimization

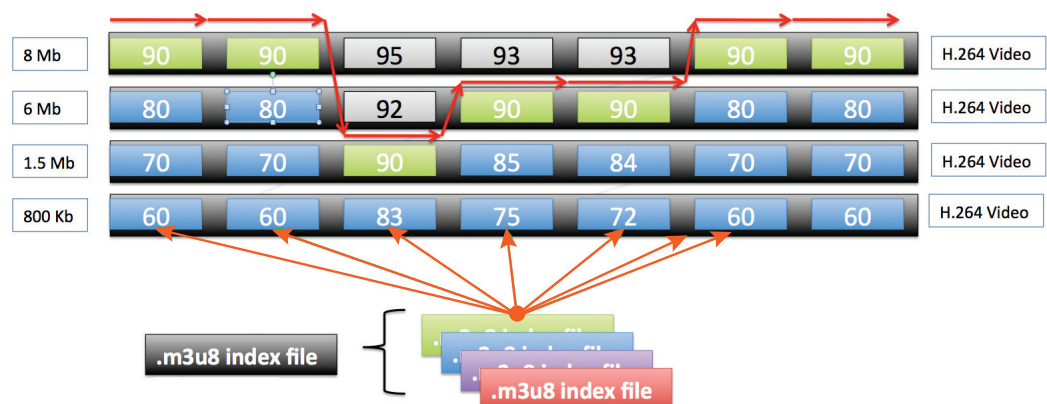
ABR Optimize for Vantage Multiscreen can intelligently construct adaptive bitrate (ABR) packages that significantly reduce delivery bandwidth *and* distribution cost while ensuring perceived quality.

Introduction

The Vantage ABR optimize option enables service providers and content creators to set a guaranteed quality level for encoded adaptive bitrate video services that need to maintain a premium viewing experience. The guaranteed quality level is based on SSIMplus, the Emmy-award-winning quality measurement suite from SSIMWave. SSIMWave used their research and expertise to develop a quality of experience (QoE) measurement technique that closely tracks the perception of actual viewers.

With ABR Optimize you can:

- Reduce delivery costs—with a potential payback happening within a single budget cycle
- Deliver your content more efficiently, and help you achieve: more viewers, added content, and competitive quality
- Ensure a quality of experience that is content, device, and viewing environment aware



ABR Optimize features

Quality of Experience Analysis (QoE) – an empirical measurement meant to quantify the fidelity of the delivered video according to the way it is perceived by the human visual system. ABR Optimize performs the QoE analysis using the SSIMplus algorithm from researchers at SSIMWave. The analysis by this algorithm provides consistent measurement across content types, and produces the strongest available correlation with human focus group quality scoring.

Package Optimization – once the video has been scored, it is then possible to set minimum QoE thresholds that ensure delivered quality is maintained consistently. An opportunity is also presented to avoid delivering video with no perceptible improvement above the desired QoE threshold. This is important because video encodings that exceed the necessary QoE are the most expensive to deliver, since they are generally at the very highest bitrates. The end result of package optimization is a dramatic reduction in delivery bandwidth requirements – and reliable delivery of the specified video quality.

Device Specific Optimization Targeting – in addition to measuring video quality at a given resolution versus the reference source file, ABR Optimize can also take into account the typical expected viewing environment and resolution versus the physical size (pixel pitch) of the viewing device. This is important since a video signal at 1920x1080 viewed on a 14cm diagonal screen at a distance of 1m will be perceived differently than that same signal viewed on a 1.5m diagonal screen at a distance of 2m. Device specific targeting allows for QoE scoring to take into account the physical device configuration and likely viewing environment.

ABR Optimize Action Overview

The ABR Optimize action is located in the Multiscreen category. This Vantage action is designed to make it easy to automate the analysis and optimization of multiscreen packages to ensure consistent quality output with minimal delivery bandwidth.

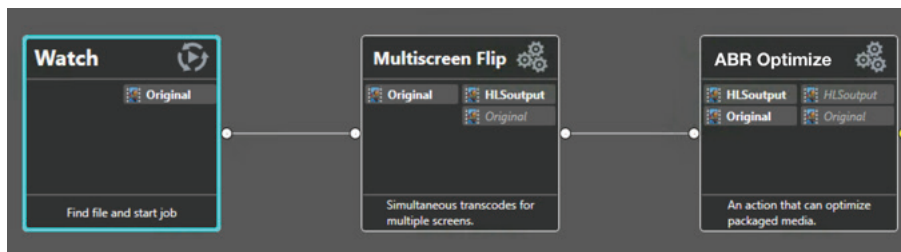
Configuring ABR Optimize Actions

Selecting input packages – the ABR Optimize action can analyze and optimize HLS packages generated by Vantage Multiscreen. These packages can be generated by a preceding Multiscreen Flip action in a Vantage workflow or from previously generated and stored files.

Selecting reference media – the optimal analysis can be performed using the original mezzanine input files used to do the original encoding in the Vantage Multiscreen Flip Action. Such a file would typically be passed forward from a preceding Multiscreen Flip action.

If reference media is not available, ABR Optimize can still analyze and improve packaging efficiency by using the highest resolution and bitrate encoding in the multiscreen package as a reference for the rest of the package encodings.

SSIMplus analyzer – the SSIMplus analyzer is responsible for the QoE measurement of the input package. In the Vantage Analysis pane you can select this analyzer. Only one analyzer is needed.



Target quality level selection – you can set the Quality of Experience Index. This is a value between 0 and 100. The right value will vary depending on the goals of your service. Generally values from 80-100 offer very high quality with difficult to detect visual degradation. Values between 60 and 80 may be used for cases where slightly more quality compromise can deliver relatively large bandwidth savings. Values below 60 would potentially be used in cases where dramatic bandwidth savings may enable services that could not previously be provided.

Reporting

The ABR Optimize action can optionally generate an XML report document which details the QoE scoring for the analyzed content.

Requirements

Each license for Vantage ABR Optimize allows a server to run one concurrent analysis comparing source video to 12 (or fewer) multiscreen-encoded variants. Licenses may float across available servers, and there may be as many concurrent analyses as there are available licenses in the pool. If there are more pending jobs than there are licenses, then jobs will queue for an available slot.