

AI-Optimized Video Encoding and MultiCDN Performance Analysis

Haivision Lightflow is a cloud-based, artificial intelligence-driven technology. Optimizing video encoding parameters and delivery workflows in a multi-CDN environment, Lightflow ensures the best balance between quality, cost, and viewer experience. Distributing video over the internet can be a complex and expensive challenge. With Lightflow Encode and Lightflow MultiCDN, analyze both content and real-time CDN performance, to optimize Quality of Experience and minimize costs in accordance with your business objectives.

Optimized Encoding and Content Analysis Decisions regarding encoding parameters are often overlooked, resulting in a loss of efficiency throughout the video workflow. Haivision Lightflow Encode performs contextual video analysis, leveraging deep learning, to determine optimal bitrates and encoding configurations for file-based or live video content on a per-title or per-scene basis, resulting in the best quality-to-bitrate performance. Each content analysis provides unique results that are applied in the transcoding process and can be configured to maximize customer-defined business KPIs, including visual quality, cost savings, and fast time-to-market. This results in significant bitrate reductions and visual quality improvements, ensuring a maximized cost-quality value.

Improved Workflow Speed Lightflow Encode includes an optional module for parallelizing video processing in order to accelerate encoding. When time to market is key, the ultra-fast encoder option allows users to analyze and transcode video faster than the real-time duration of the video itself. By combining AI-driven encoding with parallel processing, optimal content bitrate ladders will be ready for deployment as fast as possible, speeding time to monetization.

Ultra-Efficient 4K Encoding 4K video requires four times more information than HD video. The Lightflow Encode AI technology has been trained with 4K content to produce bitrate ladders up to UHD (2160p) and selects the appropriate codec (H.264, H.265, and VP9) for each asset and device to optimize bitrate and deliverability. Every video has its own unique signature of motion, color, detail, and variation; the Lightflow 4K engine analyzes video assets and applies individual encoding optimization for each one.

Intelligent CDN Performance Analysis CDNs are not all equal - performance guarantees can vary greatly by time and region. Lightflow MultiCDN leverages AI for real-time and past performance analysis to identify the best options for delivering content. In addition, content publishers may be required to adhere to distribution conditions - from very basic to highly complex. Lightflow MultiCDN can be configured according to customer-defined business rules - including delivery quality, cost management, availability or publishing rights and policies - and can be applied per region, time of day, subscriber tier, and more.

FEATURES

BENEFITS

Intelligent Encoding

Per-title and per-scene smart video analysis for optimized quality-to-bitrate encoding up to 4K/UHD

Ultra-Fast AI Encoding

Parallel processing option for encoding up to 5x real-time video

Real-Time AI-Optimized Content Delivery

Continually analyze real-time and past performance, CDN pricing and contract commitment

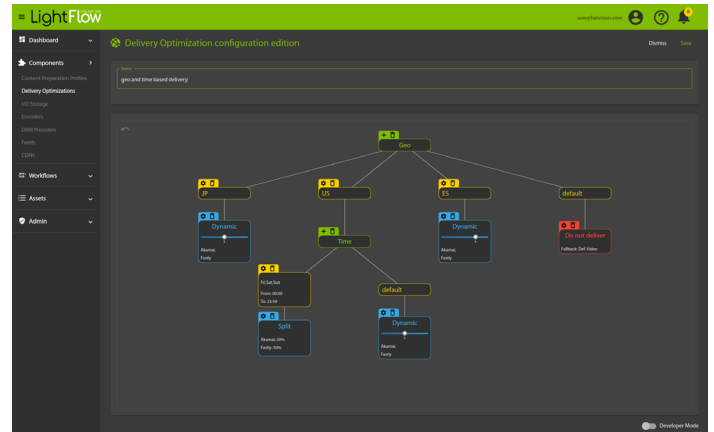
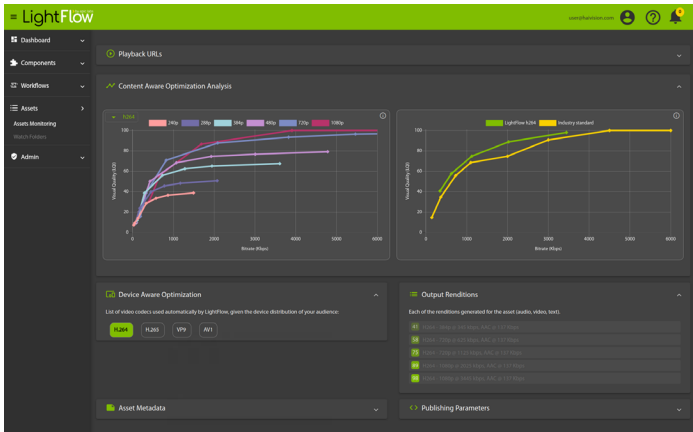
Business Rules Compliance

Ensure that all distribution rights, conditions, and customer publishing policies are adhered to

API for Workflow Integration

Programmatic consumption of multi-CDN decisions

User Interface



The LQI Difference

LQI (Lightflow Quality Index) is a quality metric representing how humans perceive video at different bitrates and resolutions. Lightflow Encode optimizes encoding to deliver the same visual quality at lower bitrates providing an improved viewing experience while reducing transcoding and CDN (delivery and storage) costs.

Intuitive User Interface

Lightflow provides an intuitive user interface for building encoding workflows and advanced decision trees for CDN switching. The visual trees are made up of nodes that can be configured manually to optimize CDN delivery or can automate delivery with AI performance analysis.

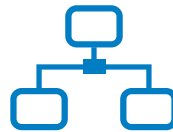
Business Benefits



**COST/QUALITY
TRADE OFF**



**CUSTOMER DEFINED
KPIs**



**UX TO MIMIC
BUSINESS RULES**



**INTEGRATION WITH ANY
EXISTING WORKFLOW**

Optimized Video Experience

