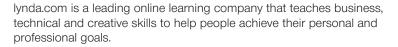# lynda.com®

Online Learning Company lynda.com Boosts Productivity with Vantage

Telestream Vantage software running on Lightspeed Servers automates and accelerates the transcoding of lynda.com's vast and rapidly expanding rich media library

> "All of these rich media assets need to be encoded into a diverse set of formats, bitrates and resolutions to ensure an optimal streaming and viewing experience. This means there could be one million unique files ready for end users to access at any given time."
>
> **Josh Olenslager at lynda.com**

lynda.com is a leading online learning company that teaches business, technical and creative skills to help people achieve their personal and professional goals.

With a subscription to lynda.com, members have access to a comprehensive collection of more than 3,000 courses and 150,000 video tutorials taught by industry experts. From writing a resumé and brushing up on essential management training skills, to programming in Python, developing an app for the latest iOS or learning PhotoShop, lynda.com offers the most current training available, often on rapidly changing topics.

lynda.com's greatest technical challenge is the management of its vast media library. This archive now holds over a quarter million rich media assets, including all of the video courses, more than 150,000 computer screen captures, short movies and documentaries associated with over 3,000 courses, including English and foreign language versions. Since lynda.com is continually updating its tutorials with new content and information–and producing 30 new course tutorials every week–the media library is rapidly expanding.

telestream

Dan Anders, Senior Delivery Coordinator, working at a Vantage workstation

"All of these rich media assets need to be encoded into a diverse set of formats, bitrates and resolutions to ensure an optimal streaming and viewing experience," said Josh Olenslager, Manager of Encoding and Publication for lynda.com in Carpinteria, CA. "This means there could be one million unique files ready for end users to access at any given time."

"We realized that to handle this increasing workload, we would need to introduce automation into our transcode workflow to eliminate manpower-intensive tasks and boost productivity," said Olenslager. "After considering several encoding systems, we chose Telestream's Vantage Transcode for its advanced automation features, robust performance and quality output."

lynda.com bought three Telestream Vantage Transcode systems. Each is paired with a Telestream Lightspeed Server, which provides GPU-accelerated processing. Two of the Vantage/Lightspeed pairs operate within lynda.com's private cloud data center in Carpinteria, California. The Vantage and Lightspeed systems are an integral part within the production content pipeline. The systems work in unison with their core systems including their Quantum Storage Area Network (SAN) and a custom-built Content/Asset Management System.

As lynda.com's content and production team operates on a global scale, the third pair of Vantage/Lightspeed systems resides at lynda.com's Graz, Austria production facility. Formerly known as video2brain before lynda.com acquired it in 2013, the Austrian facility produces German, French and Spanish versions of select lynda.com course offerings.

At the Carpinteria production facility, Vantage Transcode replaced another Telestream product, an Episode desktop encoding "cluster" that lynda.com had outgrown. "What we found was that Vantage running on the two Lightspeed Servers could effectively replace our Episode cluster, which basically had 48-core processing power," Olenslager said. "The way Vantage is able to leverage the graphics processor in Lightspeed and then apply that analysis across multiple encodes enables us to dramatically decrease our IT infrastructure and simplifies IT support."

While Episode had done a great job processing high volume, multiformat batch encoding, Olenslager explained that as the company's workload surged, they needed a more powerful, automated solution with inherent decision-making capabilities and analysis tools. He added that their overall positive experience with Episode predisposed them to choose Telestream's flagship encoder, Vantage, over competing brands.

"Before Vantage, our team used to have to spend a lot of time manually identifying and sorting files into different buckets for encoding based on their frame rates (like 30-fps, 24-fps, 15-fps, etc.), codecs, resolution levels, and other criteria. This labor-intensive process weighed us down and hindered us from scaling up to higher volumes of production," Olenslager said.

"But with Vantage, we have a single watch-folder on our SAN where we drop all the files to be transcoded, regardless of their codec type, frame rate, resolution or other technical specs, and Vantage picks them up from there and takes care of everything as part of an automated workflow."

With its built-in analysis tools and decision-making capabilities, Vantage identifies the technical attributes of each asset, analyzes the technical issues to be addressed, such as letter-boxing or up-conversion, and then determines the best workflow path to convert the file to the technical specs and formats needed for distribution.

Vantage can choose from any of the 60 workflows that lynda.com's system administrators preprogrammed into it, transcode the file into formats such as H.264, WMV and 3GPP, and replicate them out to a series of content delivery network (CDN) origin points where they can be played out on demand.

telestream

> "Before Vantage, our team used to have to spend a lot of time manually identifying and sorting files into different buckets for encoding based on their frame rates (like 30-fps, 24-fps, 15-fps, etc.), codecs, resolution levels, and other criteria. This labor-intensive process weighed us down and hindered us from scaling up to higher volumes of production"

In 2014, lynda.com also added the Vantage Reporting Tools package, which helps them analyze the performance they're getting in content delivery and whether they need to change any of their encoding parameters or specs.

"Since we installed the Vantage workflow and Lightspeed Servers, we've noticed a 30% increase in the volume of files we're processing this year compared to last year," Olenslager said. "More importantly, we're able to handle this increased workload without compromising our high production and delivery standards."

Since the HD-SDI video must be converted to the Apple ProRes format for editing, lynda.com also uses several Telestream Pipeline video capture and ingest systems. When the post work is done, the editors output their final master in ProRes onto the Vantage watch-folder on the SAN.

With many tutorials focused on software development and training, much of the original content that's produced involves screen capture video, where computer displays are captured as single video frames to teach people how to use the features in a particular software package or update.

"The technical challenge with screen capture is that the files can have dramatically different screen resolutions and sizes. And each of those need to be treated differently as far as the way that we're key framing them, or the way we deal with the cadence of the file, the audio and other technical aspects of the file," said Olenslager. "Vantage helps us maintain consistent quality control over all different file types and scenarios as part of its automated workflow."

"Suppose that down the road we want to target a particular new device on the content delivery side. Since we have over 250,000 movies in our library, if we need to convert that whole catalog over to a new format, Vantage lets us quickly spin up a new workflow to get that big job done quickly," Olenslager said.

"Our business goal is to provide relevant, up-to-date training that our members find valuable. And if we didn't have a transcoder in place that allowed us to process our editorial content quickly, that goal would be difficult to achieve," Olenslager said. "Vantage helps us to keep up our speed, productivity and agility so we can meet new challenges head-on and adapt to the needs of our online learning content and community."

To Learn More
Visit our website: www.telestream.net
Contact us at info@telestream.net or call
+1.530.470.1300