Dolby

A Hybrik White Paper

Where is your cloud media processing happening? Why does it matter?

Unlike most other cloud media processors that require you to send all your content to their installations – the Hybrik API sends our media processing engine to your content. With Hybrik, the media processing can take place right in your own cloud account.

Why does this matter? Because...

Hybrik cloud media processing:

- Gives you more control
- Can be more secure
- Saves time
- Saves money

What is cloud media processing?

Acording to the Microsoft *Cloud Computing Dictionary*, "Simply put, cloud computing is the delivery of computing services – including servers, storage, databases, networking, software, analytics, and intelligence – over the Internet ('the cloud') to offer faster innovation, flexible resources, and economies of scale. You typically pay only for cloud services you use, helping you lower your operating costs, run your infrastructure more efficiently, and scale as your business needs change."[1] Today, many applications used to create and deliver audio-visual experiences ("media processing" tools), including transcoding, are readily available via the cloud.

The good, the bad, and the ugly

Because of the large size of audio-visual files, utilizing media processing software requires an abundance of computing power. What makes cloud computing so good for media processing is the ability to utilize remote machines – as they are needed. However, moving massive files around the cloud – from storage to the machines used for processing and back to storage again – can require a great deal of bandwidth and time. The result is that most cloud media processing vendors charge by the minute or by the gigabyte or by some complex combination based on the specific service configuration selected. And, in addition to what you pay for processing, you'll likely be charged by your own cloud service provider for your files to be moved outside of the region where they are stored to the region where they will be processed. Plus, if your data was stored on one platform (e.g., Microsoft Azure), and you wanted to transcode on a service that uses a different platform (e.g., AWS), your data transfer charge might be even higher.

Don't waste time and money moving mountains of media!

Most other cloud media processing vendors require you to move your media to their installations. Conversely, with Dolby Hybrik all storage and processing can happen in your own cloud account – where your files already reside. Nothing needs to be sent to Dolby to be processed.* Instead, Hybrik can run on your own compute instances, reading and writing content directly with your storage provider.

And, while you'll be saving time and money by eliminating file transfers, you won't be making any trade-offs when it comes to quality – as Hybrik customers will tell you.

"Hybrik didn't require the typical sacrifices I've become accustomed to making when choosing video technologies. I'm sure you're familiar with the old adage: Speed, quality, or cost... Pick any two. Simply put, Dolby Hybrik gave us all three, simultaneously and equally."

– David DiGuardi, Google TV Program Manager

How does Hybrik give you more control?

Most other cloud media processers are SaaS (software as a service) applications, meaning that the vendor controls the infrastructure on which the software runs. Hybrik is a PaaS (platform as a service) application, which means that it not only gives you a great deal of control over the software itself, but also over the infrastructure. There are several advantages to this. You get to:

- Select the storage option that's best for you
- Choose what type of machines you want to use for processing
- Manage your costs while still maintaining the required throughput
- Ensure your own high-standards for security are in place

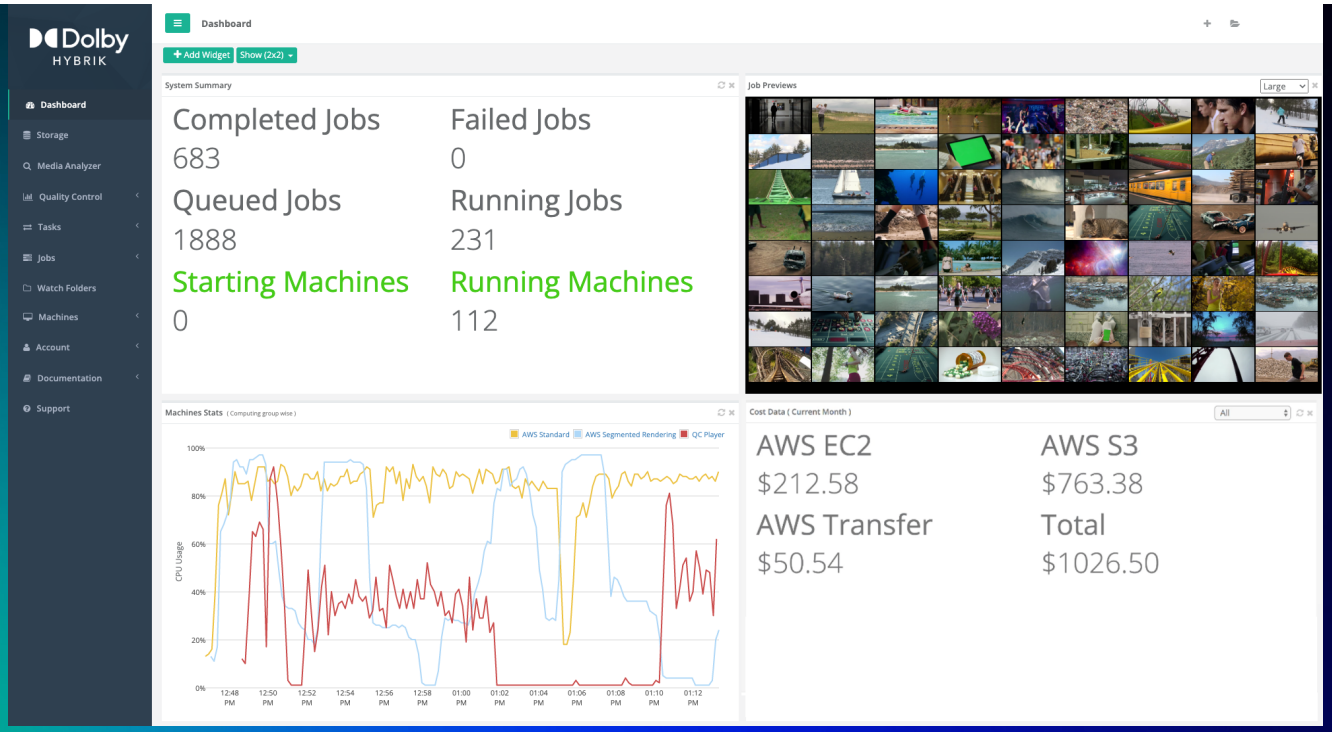
Hybrik automatically launches machines for you and shuts them down when their work is complete. When workloads increase, you can scale from 10s to 1000s of machines instantly (depending on your subscription level). Plus, the Hybrik web console allows you to browse and inspect content in the cloud, play the file in the convenient Hybrik QC player, create a pre-signed (encrypted) URL to files to share with others, or download the file locally. You can also view the JSON[2] required to make exactly the same type of media file.

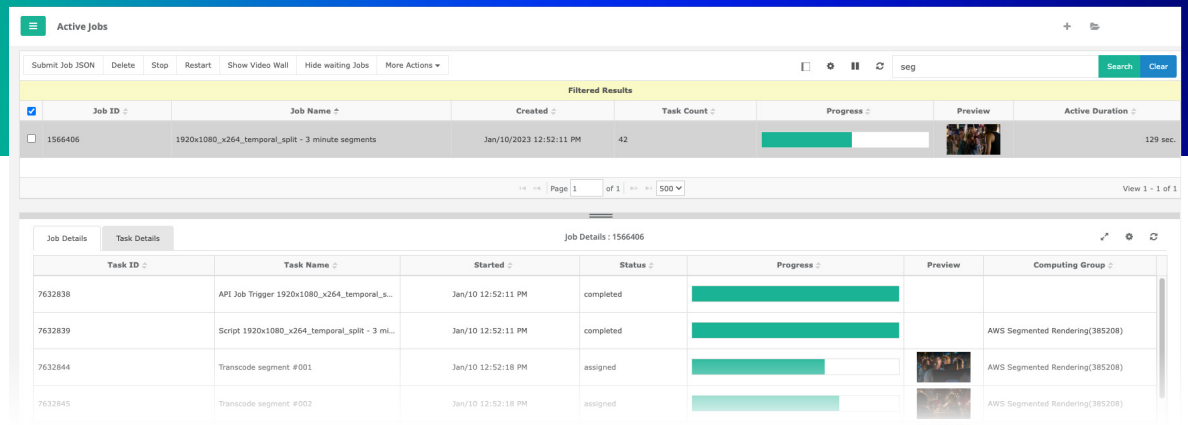
* Note that if you choose to use optional Hybrik Content-Aware Encoding or Cloud Preview services, some content may be sent to Dolby for the most efficient processing.

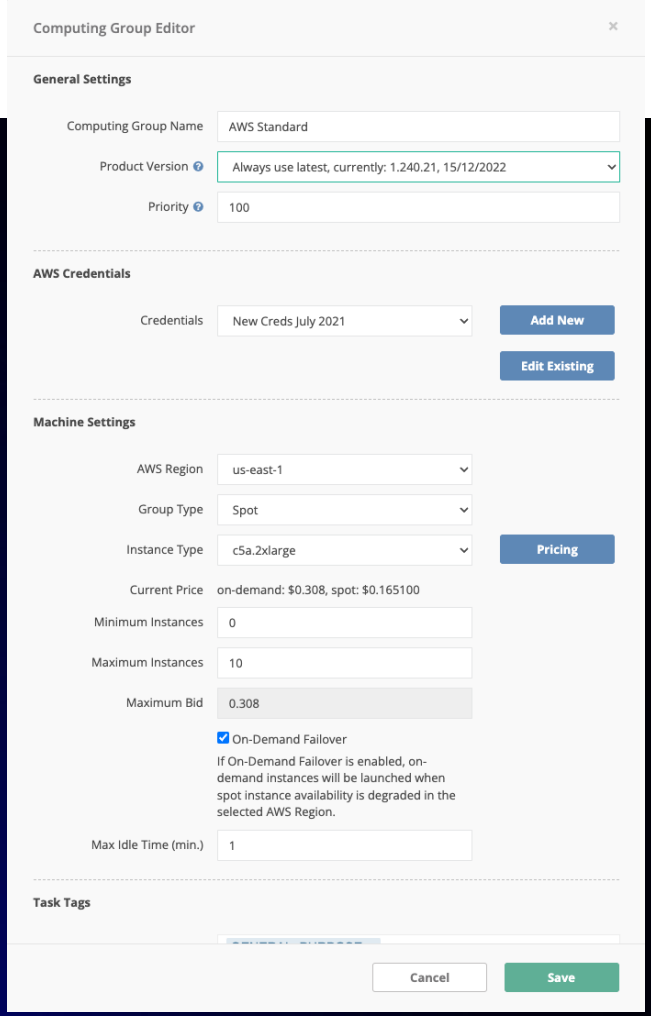
1 https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-cloud-computing/

2 https://tutorials.hybrik.com/json/

The Dolby Hybrik web console provides the information you need for highly cost-effective management and puts control of all your transcoding jobs and tasks at your fingertips.



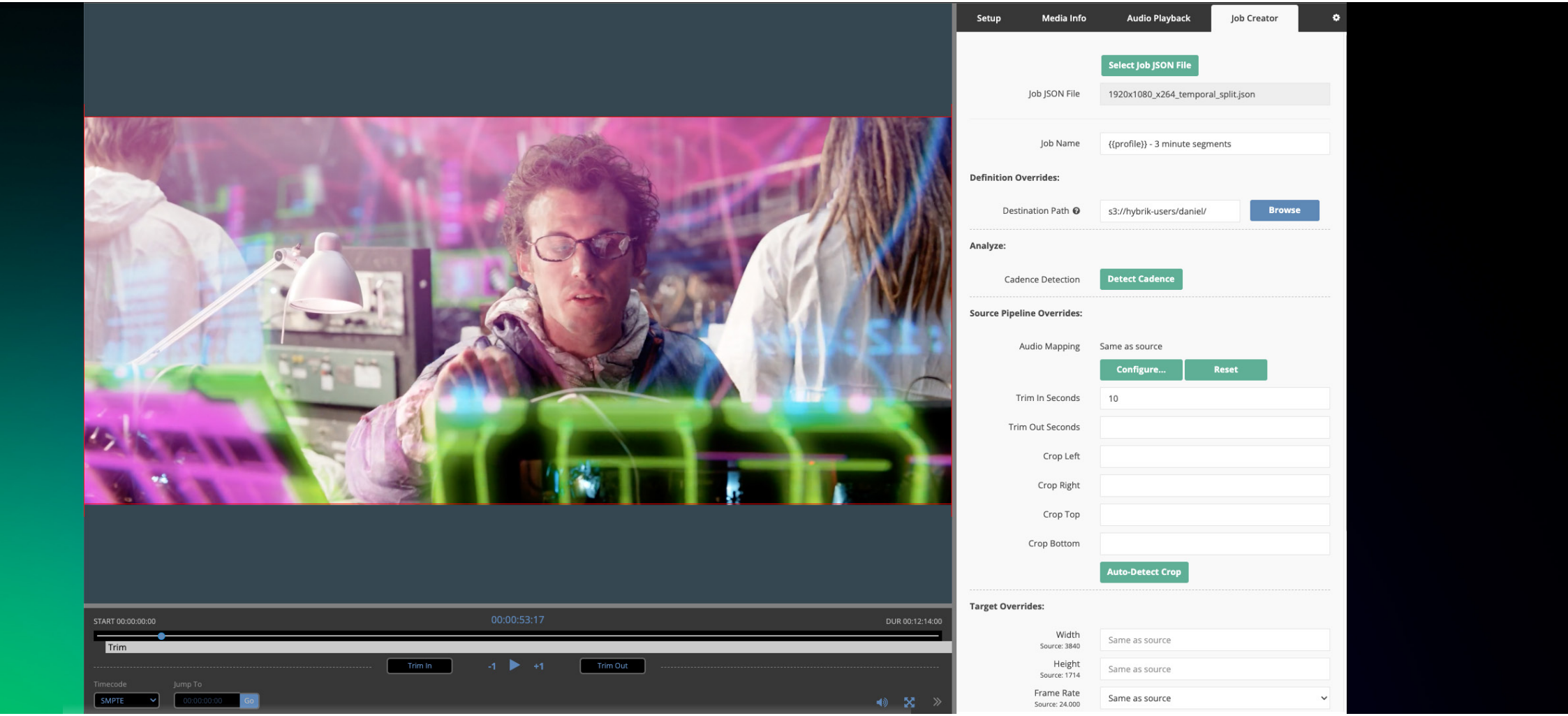




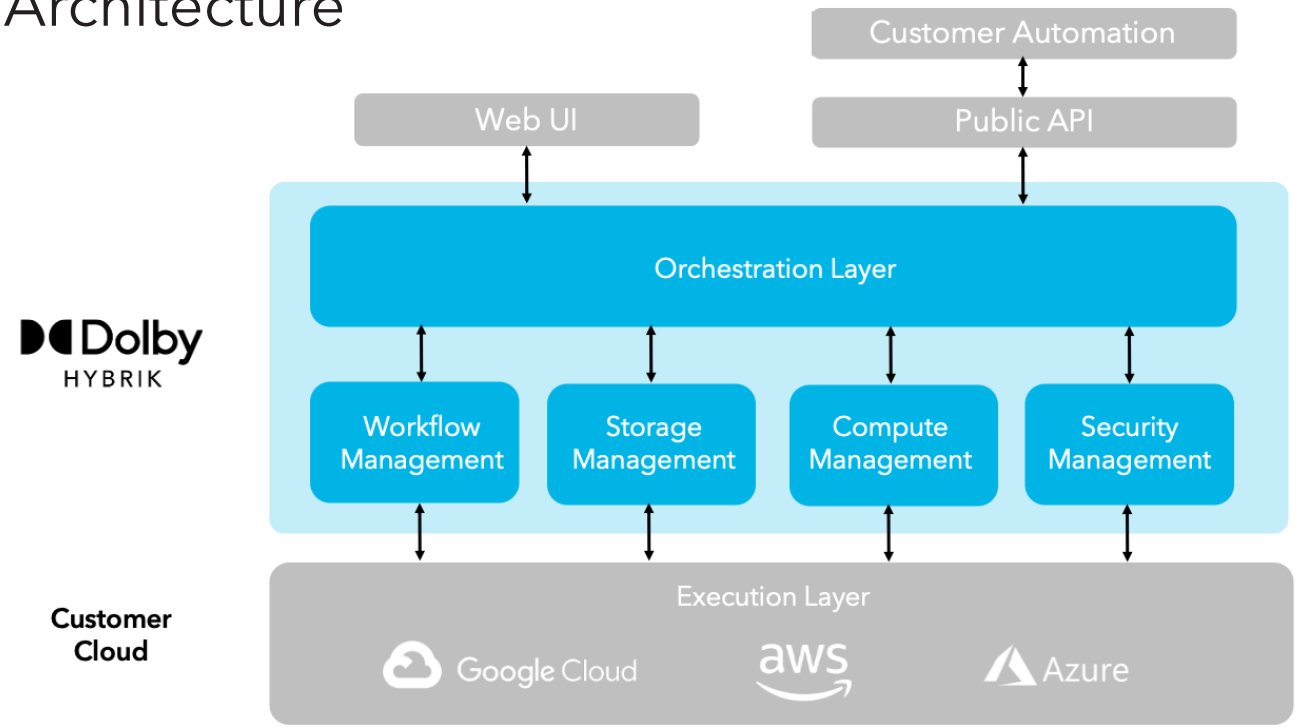
Machine instances can be either Spot or On-Demand, grouped according to instance type (vCPUs, memory, geographical region, software version, etc.), and Tagged to only accept certain types of jobs.

For each file, you can get full file details: bucket, location, name, S3 Path link URL, date last modified, as well as very granular media and content information: duration, bitrate, format, number of video and audio streams, and more.

One of the challenges when working with content in the cloud is how to view it. One option is to download the content and play it locally, but when working with multi-gigabyte mezzanine files, this is impractical. The convenient QC Player built into Hybrik is the solution to this problem, as it allows you to view your content at very high quality, in real time, as well as perform a number of other useful functions – without any downloading.



Architecture



Hybrik supports multiple cloud providers:

Compute and Storage:

- Amazon (AWS)
- Google Cloud Platform (GCP)
- Microsoft Azure

Storage Only:

- IBM COS
- Wasabi
- HTTP/HTTPS

On Premise Storage:

- Cloudian

Hybrik supports both on-demand and spot instances. Spot instances are available at a fraction of the cost of on-demand. Once Hybrik requests a spot instance, it typically takes a few minutes before it starts processing jobs. Additionally, although you may lose a spot instance when the spot market is busy, Hybrik handles launching another spot instance automatically, in the background.

- Learn more about Dolby Hybrik at: *https://professional.dolby.com/technologies/cloud-media-processing*
- Please refer to our *Pricing White Paper* for more detail on how Dolby Hybrik can massively decrease your media processing costs: *https://professional.dolby.com/siteassets/technologies/cloud-media-processing/cloud_encoding_pricing_comparision_2023.pdf*