Baselight RENDER and API

An industrial strength solution for the image factory

Web-based render queue monitor

Build the production line not the tools

The world of profitable post production has changed beyond all recognition with digital acquisition and the multiple delivery requirements of long form 'cinematic quality' series. Projects delivering thousands of visual effects, applied to hours of screen time across multiple deliverables have become the norm. To be effective, the post house has to become an image factory.

Render on your own hardware

To enable customers to transition to this new level of throughput, FilmLight has developed Baselight RENDER – an application which can be installed on customer-supplied hardware running a RHEL 8–based OS. Baselight RENDER can be used to augment Baselight and Daylight workflows or accessed through the FilmLight API for data driven pipeline activities, without tying up a creative workstation.

Multi-GPU render nodes

There is no specific hardware requirement other than being supported under the currently mandated operating system (note that FilmLightOS is only available for FilmLight supplied turnkey systems), augmented with FilmLight supplied software packages and the recommended Nvidia GPU and driver. Rendering capability is scalable via a combination of nodes and GPUs on a licensed subscription basis. The render queue processing can be monitored within Baselight, through a web-based front end or via tools constructed using the FilmLight API.

FilmLight API

The FilmLight API (Application Programming Interface) is a new client-server toolkit which allows 3rd party software to interface with Baselight and Daylight.

Considerable expertise already exists within companies to support their unique offerings. There is also readily available experience amongst web, scripting and database developers who can provide the required integration into each facility's custom framework. However, to build tools that bulk process *images* in a trusted, industry-standard

way is quite another task. The rate of change in camera decode SDKs, production requirements and deliverable formats, along with stringent quality control, makes this task a formidable one which is realistically beyond the scope of an in-house development team.

Everything in, everything out

In the eighteen years since Baselight first applied a grade to a scanned film image, the application has evolved creative colour tools at the industry's highest level of sophistication. In addition to this, Baselight has been required to support all types of EDL, image decoding, metadata extraction, geometry remapping, colour space transforms, retiming, audio handling and delivery formats. It is this trusted functionality, which wraps the core grading capabilities, that comes to play in facilitating an image factory.

FilmLight API example (python)

The first to see

Filmmaking has always pioneered new technologies – this raises certain challenges. For example, first-release cameras are often adopted in production only for their data to turn up in post before applications are able to decode it.

Thus, the FilmLight API has a full time development team working together with camera manufacturers, ensuring that the API and its associated render resource are always at the leading edge in terms of support for new codecs, lens metadata etc. As the API is built directly from the current Daylight/Baselight code base it is in constant synchronisation with these products – applications which may have been used for the first camera tests or, in the case of Daylight, with the dailies themselves.

Broad language support

The API currently supports writing client software in the following languages:

» Python 2.7
» Python 3.4 or later
» JavaScript
» NodeJS
» Java 8+ (JDK 1.8+)

In terms of functionality, the API is constantly being expanded to provide access to any action that can be performed while sitting at a Baselight system, for example:

» Extracting metadata
» Pre-building scenes
» Adding grading operators
» Queuing renders

Example programs such as Client View are shipped with the API to give an indication of the kind of sophisticated in-house applications that can be built (Client View is a web-based interface that allows clients to interact with the colourist during a grading session from a laptop or tablet – see the Baselight documentation for more details).
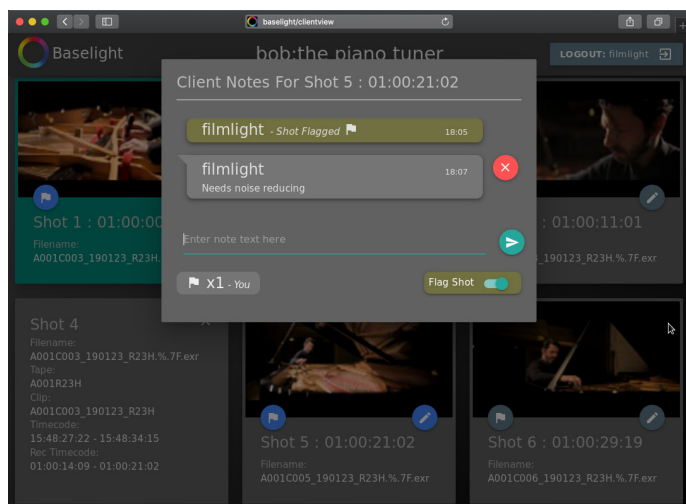
Baselight Client View in web browser window

Render node requirements

The hardware platform has to be capable of running a RHEL 8-based operating system and be equipped with one or more Nvidia GPUs supported by the Nvidia 460 series driver.

Minimum Specification:

» Single Intel Xeon 16-core CPU (Dual 2nd Generation Intel Xeon Scalable Processors recommended)

» 24GB RAM (48GB DDR4 2933MHz recommended)

» One of the following Nvidia GPUs*
    GeForce RTX 2080
    GeForce TITAN X/Xp
    Quadro RTX 6000
    Quadro RTX A4000/A6000

  (Two or more recommended - note that multiple GPUs must be of the same model)

» 10/40/100 Gigabit Ethernet or other high speed interconnect

* Other Nvidia GPUs supported by the 440 series driver may be supported and can be white-listed by the customer after suitable testing has been carried out.

Availability

Current web releases of Baselight and Daylight 5.3 are shipped with the FilmLight API documentation and the modules required to connect to and to run the server.

The following products support the API within the standard licensed constraints of each particular application.

» Baselight ONE
» Baselight TWO
» Baselight X
» Baselight ASSIST
» Baselight CONFORM
» Baselight STUDENT
» Baselight RENDER
» FLUX Store
» Daylight

Baselight RENDER is available as a software subscription to FilmLight customers on support. The price is tiered by number of render nodes and GPU count per node.

Please contact your FilmLight sales representative for more details.