

**CASE  
STUDY****Remote Picture Labs Revolutionizes  
Remote Editing Workflows with Leostream****About Remote Picture Labs**

Based in Burbank, Calif., Remote Picture Labs is a joint venture between Creative Mobile Solutions, an Emmy Award-winning developer of tapeless environments for live events and studio shows, and J/KAM Digital, a provider of innovative editing and shared storage solutions for more than 25 years. RPL is focused on providing media companies and tier-one sports organizations with high-performance remote collaborative editing solutions over private cloud infrastructure.

Episodic television and feature film editing has traditionally been performed in edit bays located on studio lots, or in production company offices and dedicated post-production facilities. For decades this workflow was essentially unchanged – until the Covid-19 pandemic hit in March 2020. With post-production teams confined to their homes, producers began to seek an alternative method for finishing their shows. Enter remote video editing, a breakthrough technology offered by Remote Picture Labs (RPL).

In developing its solution, RPL co-founder Noah Gusdorff, CTO Erik Beauchamp and their team set out to build a system that offered the same video quality and user experience expected of traditional editing environments. With decades of combined know-how in digital production workflows, the company's partners called upon leading technology vendors, such as Leostream, to build a virtualized collaborative editing solution that outperforms many in-house systems. In doing so, RPL became one of a small number of vendors pioneering the transition to remote workflows and enabling more flexibility for editors and producers in the media and entertainment industry.

During the solution's early development stage, Gusdorff and Beauchamp quickly realized the important role that a remote desktop connection manager would play in authenticating users and monitoring remote sessions. After assessing several options, RPL selected the Leostream™ Platform to facilitate the brokering of desktop connections and to satisfy a variety of complex needs related to content security and auditing.

**The user experience starts with secure authentication**

Providing an optimal level of picture, sound, and pixel quality to high-performance workstations — like those running editing software such as Avid Media Composer and Adobe Premiere Pro — requires intricate orchestration to properly function in a virtualized environment. First and foremost, the front-end experience must be flawless — and that starts with the entry point into the system. Leostream supports a variety of mechanisms to confirm an RPL user's identity and authorize access to the remote workstation, including Active Directory, Azure AD, multi-factor authentication, and integration with any identity provider that supports the SAML protocol. Additionally, Leostream integrates with a variety of

*"We reviewed a number of different solutions and recognized that Leostream connection brokering was miles ahead of everyone else."*

Erik Beauchamp, CTO, Remote Picture Labs

remote display protocols to allow organizations to select the best protocol based on their users' needs. In the case of RPL, Leostream facilitates Teradici PCoIP-based connections to deliver a highly secure and responsive editing environment.

"The great part is that the Leostream technology doesn't get in the way of the creative process," explained Gusdorff. "The only interaction users have with Leostream is entering their username and password, and then Leostream does all of the hard work in the background. It doesn't slow anything down, it doesn't inhibit, it's seamless to the user."

When a client logs in, Leostream fires up the workstation and connects all required services. "As far as the client knows, the machine is up and running and ready to go, but it's actually offline," elaborated Beauchamp. "Leostream brings it online in the blink of an eye, something that is so simple but so incredibly important to editors, who are constantly under pressure to work fast."

Producers of television series generally oversee multiple episodes at any given time. The RPL solution presents them with a list of available resources upon logging in with their secure credentials. The producer can connect to each production separately and work on projects independently of each other in a dedicated editing environment. "We have producers that need to log into five, 10 or even 20 edit bays, and they can oversee all of them, while the editors only have limited access to what's assigned to them," described Gusdorff. The resource lists can be dynamic and changed on the fly, which is particularly helpful if a new editor gets added or one leaves a show, since modifications to access policies can be put into effect immediately.

RPL has enabled several authentication methods within Leostream. "All of the Leostream modules and components are tied into our infrastructure, which assures that we're compliant with all of the content security regulations required in the world of media and entertainment," commented Beauchamp.

There is a security chain and several different vendor products that must work together for the RPL solution to adhere to industry standards. This chain includes integration with an Active Directory system and a RADIUS server that manages two-factor and multi-factor authentication. In addition, the system blends solutions provided by Teradici and a heavy layer of Microsoft Windows. "Leostream is really the glue that synchronizes and ties everything together," said Gusdorff.

## Automation and monitoring: keys to a powerful backend remote editing environment

Beyond authentication, RPL relies on the Leostream Platform to monitor remote sessions and automate certain tasks.

"There are a million things that happen once the user enters their password," commented Gusdorff. "That's where Leostream is invaluable."

Many aspects of RPL's remote workflow are controlled and managed through a large, centralized Leostream deployment. After seeing rapid adoption of its solution, RPL is scaling up and plans to internally increase automation. "The more automation we can put in place, the more efficiency and consistency we have," explained Gusdorff.

Out-of-the-box features like pools, plans, and policies are used to customize the Leostream Platform and map users to the appropriate resources without manual intervention. In the future, RPL plans to take advantage of the Leostream API to expand on the rest of its automation infrastructure.

The IT team at RPL also relies on monitoring tools within Leostream to see how many users are connecting daily, their usage patterns, their location, and more. "We have an audit log that we review multiple times a day — if there are any issues, any bad passwords, any authentication problems, we see them," said Beauchamp. Not only does this capability allow the IT staff to spot potential intrusions or security threats, it also enhances the clients' experience. RPL will proactively reach out to its users if they spot connection problems — oftentimes before the user even needs to contact support.

When it comes to monitoring, audit trails and reporting are absolute musts. According to Gusdorff, "When you are dealing with studios and big media corporations, they want to know who is touching what and when." Leostream tracks all necessary metrics in real time. "We can see who is connecting from where, from what IP address, from what host machine, what time they connect, what time they disconnect, etcetera," detailed Beauchamp.

Content security is one of the highest priorities for RPL's customers, and Beauchamp said that partnering with a well-respected vendor such as Leostream has been critical. "Having a product name like Leostream helps a lot. The companies are familiar with it, and it checks all the boxes on the security side."

“Leostream is really the glue that synchronizes and ties everything together.”

Noah Gusdorff  
Cofounder, Remote Picture Labs

## The show must go on... despite a pandemic

By incorporating premier technologies and integrating best practices for remote access into its solution, RPL can immediately move workflows to its remote environment while allowing the use of existing media and projects.

One of the big pushes for remote capabilities came from the *Jimmy Kimmel Live!* TV show, whose creatives demanded that everyone on their team be able to collaborate no matter where they were located. “On a show like *Jimmy Kimmel Live!*, you don’t have weeks or months to produce your content,” explained Beauchamp. “From the time a show is recorded to the time the editor has to build it and get it to air is just a matter of hours, if not less. Sometimes it’s minutes.”

By migrating Kimmel’s entire post-production environment to the RPL private cloud, the company made it possible for the show’s editors, assistants and graphics artists to work from their respective homes and collaborate just as they had before the pandemic.

With tight deadlines to meet, minimizing system downtime is paramount for RPL, and having a relationship with Leostream made all the difference. “The engineering team at Leostream helped us quickly get builds tested and vetted and running in the production environment. It was great. Our clients never missed a beat. All of that happened in real time while we were in full production,” said Beauchamp. Plus, by tracking user activity within Leostream, the IT team at RPL can thoughtfully plan maintenance windows based on when there will be the least impact.

## Remote and hybrid workflows are here to stay for post-production editors

The RPL solution has also been put to the test in hybrid post-production environments that blend at-home and in-office workstations. “Even when we have editors working at the office, they can go home at the end of the day and do some more work or split their time between the home and office during the week,” he explained. The way the Leostream Platform handles the brokering of resources and controlling of logins is a key enabler of this flexibility. Users can connect into the environment and pick up exactly where they left off from any workstation and with the exact same tool set — no matter if they are at home, at the studio, or working from the road.

Much of what RPL has achieved is the result of the highly versatile Leostream Platform. As vendor-neutral software, not only does the Leostream Platform consolidate the array of technologies often found in large-scale virtual and hosted desktop initiatives, it also simplifies workflow complexity. Even with a long list of requirements, the Leostream Platform was able to satisfy all of the configuration needs of RPL and its clients. What this means for RPL is that the company will continue to be able to scale with Leostream.

In an industry that faces many challenges for remote work, RPL has created a robust and agile solution that reproduces the in-studio experience. The inclusion of the Leostream Platform has been instrumental in creating this seamless and high-performance remote desktop experience for Hollywood’s demanding post-production creatives.

## About Leostream

Leostream provides the critical remote desktop connection management technology required for organizations to build successful large-scale remote access solutions. The Leostream Platform embodies two decades of research and development in supporting customers with hosted desktop environments, including VDI, hybrid cloud, and high-performance display protocols. The Leostream Platform has proven to be one of the world’s most robust desktop connection management platforms with a remote access feature that allows today’s enterprises to choose the best-of-breed components to satisfy their complex security, cost, and flexibility needs.