



Time and Reliability: Why RED Studios Relies on the G-RACK™ 12

RED Studios Hollywood (originally founded as Metro Pictures Back Lot #3 in 1915) boasts a long history of riding the cutting edge in commercial video. Today, under the growing umbrella of camera pioneer RED DIGITAL CINEMA, RED Studios keeps advancing video production in every way possible. Whether that means finding new ways to apply RED camera technology or improving the workflow between those cameras and final video consumption, every step involves the integration of storage.

The post production team at RED Studios stays deceptively small. According to RED Studios' Dan Duran, the group is about a half of a dozen editors working almost exclusively within Adobe® Premiere Pro®, AVID Media Composer®, and Apple's Final Cut Pro® X, with the bulk of its content arriving in 4K+ R3D RAW file formats. For an idea of how much data is flying around at RED Studios on top of Dan's team — at any given time, the studio has four or five shows in active production on the lot. Each of those shows generates roughly 12TB of raw data every two to three weeks. Edits, transcoding, and other operations only add to the load.

In assessing their storage strategy, Duran and his colleagues often felt like they were standing in front of an information firehose. The demands of growth and a packed work schedule often left the team turning to immediately available fixes rather than more strategic, longer-term solutions.

"At RED, our MO has always been to push the limits of technology and see what storage solutions we could build ourselves to best suit our workflows," says Duran. "It feels like we can take a break from that now that we have these G-RACK systems, as they cater to our demands perfectly."



Enter G-Technology's G-RACK 12

In most case studies, this would be where we talk about the relative weakness of RED Studio's former NAS solutions. Full disclosure: They weren't that bad. In fact, Dan Duran notes that his team never suffered a data loss. (That's not to say that drives never failed, but RAID redundancy always did its job and pulled files back from the abyss.) No one ever found themselves unable to access their files. The studio's former NAS solutions were – fine. In fact, in our interview, most of Duran's examples of previous storage issues boiled down to file organization or minor staff issues that could be addressed with work-arounds.

Why, then, did RED Studios make the investment to switch from its existing DIY options to a G-RACK 12? Two primary factors: time and reliability. The company knew that its storage workflow could be improved on these important factors as well as other fronts and simply being "fine" wasn't good enough for a company intent on expansion and setting an industry-wide example.

About Time

The G-RACK 12 offers a long list of enticing features, including a 2U form factor, 12-bay drive capacity, dual Intel Xeon E5 processors, and up to 120TB of HGST Enterprise-class storage. If the user should happen to outgrow this storage, the optional G-RACK 12 expansion units simply plug in via 12Gbps mini-SAS, enabling an additional 120TB of storage. Duran and his team elected to start with a dozen 6TB drives configured in RAID 6 for double drive failure resiliency. After formatting, this setup provided roughly 60TB in a single, high-speed workspace built from HGST disk drives designed specifically for demanding, multi-user environments.

Just as scaling the G-RACK 12's capacity can be done in mere minutes, the same holds true of its network bandwidth. The storage server ships with four active 10Gbps copper Ethernet ports. SFP+ fiber network interfaces can be added and easily aggregated through G-Technology's configuration menus for the type of massive network throughput needed in 4K+ production operations like RED Studios. Such a wide networking pipe for rich, high-definition files can yield tremendous time savings.

Feature breadth can also translate into time savings.

"We've had events where 4K material had to be tested internally on a laptop, and we didn't have time to transfer to an external hard drive," says Duran. "Being able to easily create a user on the G-RACK, connect directly to a laptop, and having the speed to playback 4K would have been a life saver."

Time benefits during daily use abound with the G-RACK 12, but Duran was also relieved to find so few of his group's hours consumed with everything from component procurement to deployment to configuration. The G-RACK 12 practically arrived ready to run. From lifting the appliance out of its box to transferring the first files, total setup time at RED Studios clocked in at under one hour. And that time-saving advantage in setting up the unit only echoed later with additional time-saving with ease of maintenance.

"It's a lot of work to take care of a self-built storage product," says Duran. "You never know what could happen to it. I love that the G-RACK was ready to go, very intuitive, and just as easy on upkeep. We created accounts on it for the effects team in no time and just went to the races. With a DIY solution, you have to verify everything, keep updating the drivers and firmware, and all that stuff – it's very time-consuming."

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Dan Duran



About Reliability

Ultimately, all the valuable hours saved here and there can't hold a candle to the blazing urgency of data loss. One failed drive, or even a scratched platter, is all it takes to wreck a critical project and sacrifice a professional reputation. This is why RED Studios runs its G-RACK 12 in RAID 6, which can accommodate two drive failures, rather than the more conventional RAID 5.



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RED Studios has plenty of prior experience with G-Technology quality. The outfit regularly takes G-SPEED® Studio XL units into the field for ingesting camera footage on the fly. The G-SPEED Studio XL uses the same Enterprise-class HGST drives and stream-optimized engineering as the G-RACK 12, and its Thunderbolt™ 2 connectivity makes quick work of passing files up into the G-RACK 12 as soon as it returns to the studio.

Beyond these factors, G-Technology stocks the G-RACK 12 with dual redundant power supplies, 3-fan cooling, mirrored 1TB OS drives, integration of the BTRfs file system, which also specializes in data protection. From start to finish, the G-RACK 12 was built to be robust, dependable, and a safe haven for creative assets.

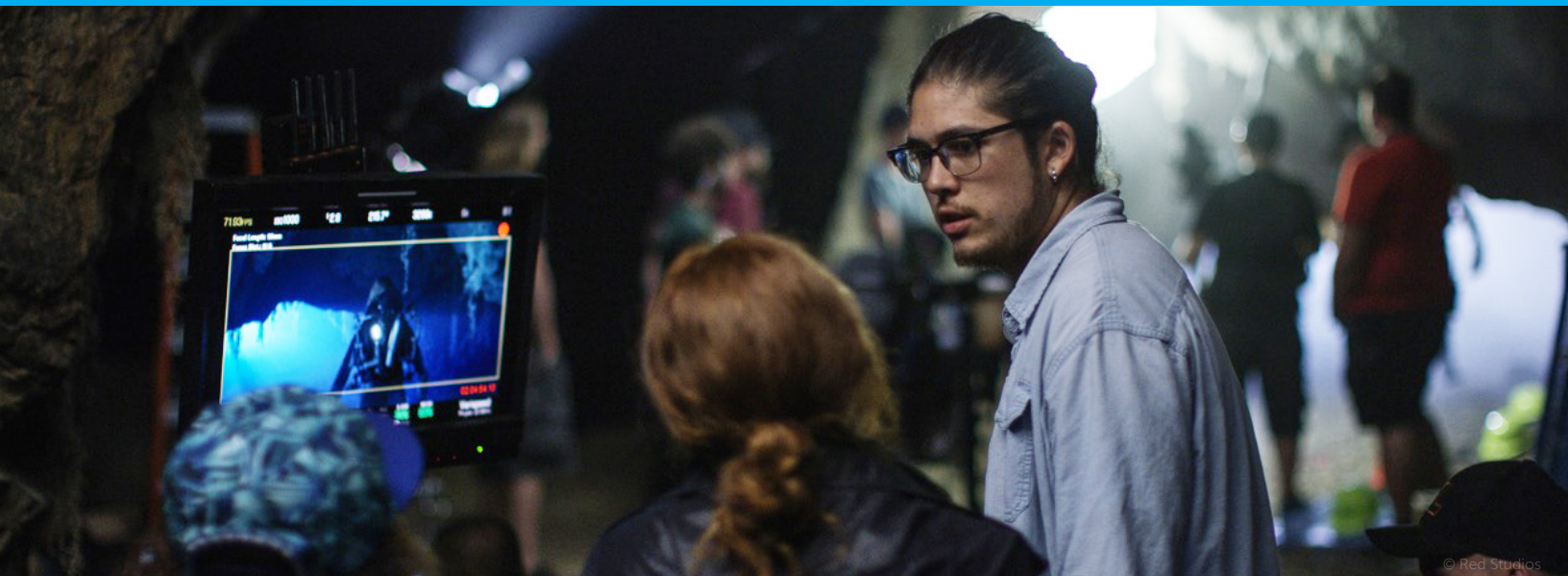
The Gold Standard of RED Storage

Given a field full of NAS solution options, we asked Dan Duran why RED Studios selected G-Technology above all others.

"Because the G-RACK 12 is the only one that doesn't look like a toaster!" he laughed. "Seriously, though, we get a fair number of producers and other important clients walking



G|RACK™ 12



through our facilities. We like being able to show them how we get their work done, and the G-RACK is not only an impressive performer, but it also looks impressively stylish sitting in the middle of your IT operation. This is a business where looks also matter.”

Duran points to many other G-RACK 12 advantages he anticipates enjoying in the future, including its miniSAS-based Expansion Chassis, ability to have even new hires instantly grasp G-Technology’s intuitive NAS operating system, and bringing remote editing groups into closer collaboration via the G-RACK 12’s substantial bandwidth. Most of all, though, he loves having a storage solution that makes sense for and is in sync with his company’s overarching message.

“If you’re using RED,” he says, “then you obviously want the best, and that includes your post work solutions. The G-RACK 12 reflects our commitment to representing the best technologies possible. It just doesn’t make sense to rely on anything less.”

G|RACK™ 12



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