

**M+E**

**JOURNAL**

# It's Showtime!

Innovation explodes across every workflow as technology emerges from the pandemic.



Where are you in this accelerated evolution?

## **DIVERSITY & INCLUSION**

In the office, behind the camera, and on the screen, diversity is crucial

## **SECURITY**

Remote productions create new security concerns, with assets under siege

## **SMART CONTENT**

Artificial intelligence and machine learning are being applied in new, exciting ways

## **NEW WORKFLOWS**

The cloud is delivering on its promise, powering the future of productions

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## FROM EXPERIMENTS TO DEPENDABILITY

The promise of the cloud is now the reality of production

By Stephen Tallamy, CTO, EditShare

**ABSTRACT:** In 2020, the industry coped with massive, enforced change, but was successful in embracing new technology by shifting to cloud and virtualized environments, changing the dynamics of TV content production. The most recent cloud and virtualized environments can enhance productivity for content makers and feed the ever-increasing demands from streaming and OTT services.

In order to understand how production in the cloud works, it's important to take in the big picture. The term "cloud" came from the quite correct assumption that, as a user, it is a "cloud" of technology that provides services that you can assume, without having to get involved in the nuts and bolts, and, just like real clouds, they're not bound to a single location. Storage in the cloud is real storage, and cloud compute resources are real computers. So, it's possible to run even the most demanding of post-production processes in the cloud.

The very rapid — and necessary — pivot to remote working has moved the cloud industry forward five years or more in terms of adoption. From the perspective of a cloud-focused company like EditShare, while it would be disingenuous to claim that it had been planning for a pandemic, it would be fair to say that it was planning for the cloud, and this health emergency, at the very least, has been a very good proof of concept.

Another of the cloud's silver linings is that it is immensely flexible, able to scale up and scale down to suit the often roller-coaster-like needs of the production industry. This shape-shifting ability lets producers try out new and potentially risky workflows

without a massive capital outlay and makes a safer, more fertile territory for creative ideas. It makes it easier for production heads to give the “go-ahead” for pilots and confers longevity to those series burdened by hard infrastructure costs.

Cloud production isn’t mass market yet but increasing numbers of successful users and their productions are moving it in that direction.

#### **FIVE REASONS WHY THE POST PRODUCTION INDUSTRY WILL EMBRACE THE CLOUD**

**1. Cloud technology is maturing:** The obstacles that existed when the cloud swung into action over 10 years ago are melting away or becoming irrelevant.

**2. The industry is changing in the direction of the cloud:** Ever since film gave way to files, the benefits of cloud production have beckoned. The cloud doesn’t just repeat what happens on firm terrain, it improves it and sometimes makes what was previously impossible, possible.

**3. Tools and technologies are emerging that can ease the transition from on-premise to cloud:** As much as work is progressing to improve the scope and scale of the cloud, developers are also focusing on hybrid cloud methodologies. This eases the transition to the cloud by removing the “all or nothing” debate about whether to embrace cloud production.

**4. 5G and satellite connectivity increase ubiquity and lower latency:** 5G is much more about infrastructure than cell phones. It’s about rock-solid, high bandwidth connectivity and extremely low latency (potentially less than a frame with an edge server). It will be like a LAN connection. Perfect for post-production. Satellites will ensure that this type of service is available anywhere (literally anywhere) on the planet.

**5. The results are in: the cloud increases productivity and accessibility:** People can work from anywhere. With smart proxy technology there’s no need for powerful servers near every editor. Faster results. No need to manage your own air-conditioned racks of servers on-premise. Instant scalability. Productive remote working. It also boosts accessibility and diversity for a wide cohort of users, some who might be geographically remote and some who might not be able to afford the sort of equipment you’d need at home to compete with a facility.

***THE VERY RAPID — and necessary — pivot to remote working has moved the cloud industry forward five years or more in terms of adoption. It’s immensely flexible, and able to scale up and scale down to suit the often rollercoaster-like needs of the production industry.***

#### **FIVE WAYS THAT TECHNOLOGY IS OVERCOMING THE FINAL OBSTACLES TO UNIVERSAL ADOPTION OF THE CLOUD**

**1. Proxy editing:** Until ubiquitous high bandwidth is a reality, proxy editing is the practical approach to production work in the cloud. High-quality, detailed and frame-accurate proxies can seamlessly substitute for full resolution files, allowing all but the most visually critical work to be done remotely and without expensive workstations on site.

**2. Close integration with existing non-linear editing systems (NLES):** NLES that don’t have a remote and collaborative ability built in can interface with cloud services through “panels” and “workflow integrations” which act as a portal into cloud services. To users, it’s just an extension to their familiar interface that brings the power of the cloud directly into their NLES.

**3. What used to be an on-premise media optimization software is now a layer that can be run as efficiently in the cloud as on the ground:** Nobody has to be concerned that cloud storage is “generic,” with



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only vanilla performance for specialist media production. The same software that optimizes on-premise storage can be run on cloud storage, bringing the same high performance with the added operational efficiency of utilizing (and paying for) only what is needed. No need to pre-plan purchases or have systems sitting idle. Expand and contract your operation on the fly.

**4. Well-crafted software ensures seamless security between all versions of media**, wherever it is, keeping complexity away from users: Security of the content is critical and for most media professionals, it's the number one concern.

An advantage of most public cloud environments is there are significant built-in security options that come at considerable cost and complexity to implement in an on-premise network. From encryption at rest for archive and online storage, to fine grained network level access control, from web application firewalls (WAF) to advanced intrusion detection, from hardened operating system images to distributed denial of service (DDoS) protection. These features have been developed to meet the strongest of security requirements and proven out for many years in video distribution systems. Following the best practices and getting a full review (e.g., an Amazon Web Services well-architected review and penetration test), will ensure that content is safer in the cloud than anywhere else.

**5. Edge computing will lower latency still further and make the cloud experience virtually indistinguishable from on-prem — except better:** The trends are towards a cloud experience that not only matches “traditional” on-premise effectiveness, but exceeds it in almost every way. Much of this is driven by wider trends in the

communication and computing industries. But for media industry users, there will always be companies working on additional layers of functionality and optimization to make the overall experience desirable and productive.

Edge computing and 5G will only add to this and as they roll out over the next five years, it's likely that the cloud will become the default choice for forward-looking production companies — if it hasn't already.

### **ONE FINAL BENEFIT OF THE CLOUD: IT BECOMES BIGGER THAN THE SUM OF ITS PARTS**

When the cloud started to become a viable option for video and film production it was quite justifiably seen as an experiment. There was no settled best practice and technical obstacles limited use cases to very small and specific parts of the post production spectrum.

This has all changed. The media production ecosystem, provided by companies like EditShare, has optimized the “basic” offering of the cloud to the extent that is now possible to carry out full resolution, online production and the range of services and functions is growing exponentially. This huge rate of expansion is not — as it might seem intuitively — chaotic or disorganized.

The reason for this is that software vendors have seen the potential and the massive opportunities of open APIs: stable and published interfaces that, used well, can make the cloud bigger than the sum of its parts. No single company has a monopoly on innovation. There will always be a greater good that is reached by having an orchestra of players working together to the same beat. **▣**

# Create Anywhere. Create Everywhere.

EditShare has redefined the economics of editing in the cloud while improving the overall user experience, allowing you to embrace remote video production to create anywhere and everywhere. With EFS, EFSv, and FLOW, we enable production anywhere, at any time, through collaborative storage and media management solutions that empower creators to tell their stories, on-premise and in the cloud.

Visit us at <https://editshare.com/solutions> to learn more.

