



## Remote Editing Concept

**Author:**

Hans Douma

**Date:**

March 22<sup>nd</sup>, 2021

**Version:**

1.0

# 1 INTRODUCTION

The current pandemic has exponentially increased the demand for solutions that will allow content contributors and editorial staff to work from a safe workplace. Although the industry has always worked on technology that would enable this, the results were always mediocre at best.

Covid-19 made it clear this was no longer something that would be a “nice-to-have” but became a requirement for broadcasters, content providers and creative staff to stay “on-air”.

DeTune has always been in the business of “optimizing production workflows”, which lead us to the next step and offer its clients a complete remote editing solution!

## 2 REMOTE EDITING - CHALLENGES

Many solutions currently offered will either only work with specific applications or specific environments, making it hard for e.g. freelance contributors to continue their work from home. Security issues have led to major headaches at IT-departments as the first attempts to introduce remote editing were started. So where are the actual challenges?

### 2.1 Access to content

In most situations, your staff working from home will be able to edit any content they have locally, but they would not have access to the content stored on the enterprise-type storage systems installed at the broadcaster or production company. Getting access to this content could be achieved by allowing staff to access the shared storage through a VPN connection or exposing the storage to the public internet...

No need to say that this was not the preferred way to go in the light of network security. Apart from that, often production networks would be separated from public networks (for a very good reason!).

### 2.2 Internet Bandwidth

Even if users would have remote access to shared storage, they would need to download all the content, as bandwidth (internet) limitations will not allow editing directly off and to the shared storage. After local editing, the result would have to be uploaded back up to the shared storage, again taking a lot of time, because none of the obvious tools (Dropbox, WeTransfer) are really optimized for quick up- and downloading large files. And a 1 hr 4K clip could easily be 2TB in size!

### 2.3 Hardware requirements

Not all users will have the hardware required to perform the work they would usually be doing in the office. 4K editing can require a pretty good laptop/computer, a proper (large) screen and good loudspeakers are the minimal requirements to be able to deliver a good quality product!

## 2.4 Collaboration

Many projects will be handled by multiple members of your staff, but when all these members are working from home, there is no way to share projects, review and comment during the process. Only after the actual rendered version was uploaded back to the central site, all collaborators of the project would be able to see the result. No surprise that this is a highly inefficient workflow!

## 3 THE ANSWERS

There are basically 2 solutions to the problems explained above:

### 3.1 Proxy editing

Instead of giving the remote user access to the high-resolution footage to edit with, the system will provide low(er) resolution versions of all content, which can be downloaded much faster by the remote user. The user can then use these low-resolution versions in her/his timeline and finish the project. The actual project file is then uploaded and used on an editing station on-premise (which has access to the shared storage and the high-resolution footage), where the project is rendered using the high-resolution material.

The user can also upload her/his provisional versions back into the system, as these versions are also relatively small and will upload fairly quickly.

### 3.2 PCoIP editing

This solution provides the user with an optimized “remote desktop” of the editing machine that has actual access to the shared storage. This machine can either be an editing workstation at the station or production company, or any prepared Virtual Machine in a datacenter. Because all the actual work is done on the “server” machine, the specifications of the local laptop/computer don’t need to be unexceptionally high. The PCoIP solution has been optimized to give you the best possible user experience; high quality video, high refresh rates and ultra low latency. Your internet connection should be able to support 10Mb/s downstream per monitor you would like to see remotely. PCoIP editing can support frame rates and resolutions up to UHD at 60fps (this will require higher internet bandwidth).

Because all the work is done on the actual environment, collaboration with other team members is a breeze and feels like you are in the same room with your colleagues!

## 4 OUR SOLUTIONS

De Tune can support both scenarios. Whether you would like to use Proxy Editing or PCoIP, we can support you! Our solution builds around the award-winning storage concept from Elements. Elements combines a high-performance production storage with a Media Asset Management system, user management, web-access for contribution, low resolution viewing and downloading of content, PCoIP support and review & approval workflows.

Our editing servers can be set up in a professional datacenter, which is equipped with high bandwidth connectivity to the internet. These servers are connected to our Elemental storage/MAM system and can be equipped with any application you need to use, as long as these run on a Windows OS. You can either bring your own license or let us take care of providing you with the appropriate software and licenses.

# 5 PRESENTATION

