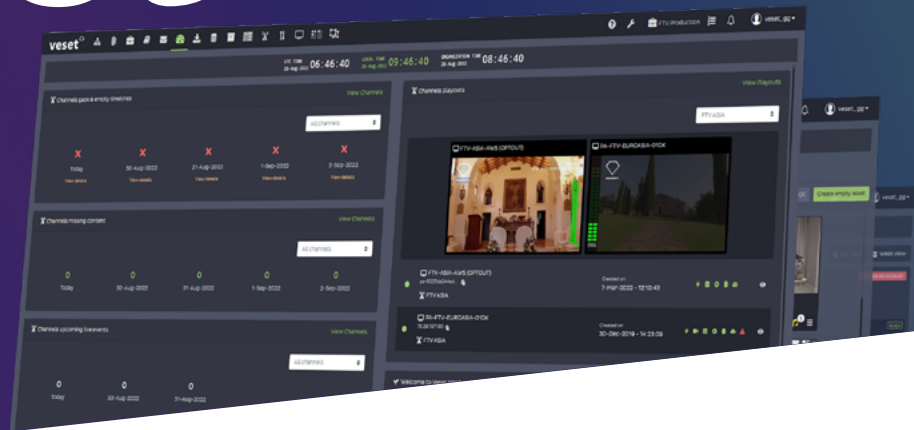


# veset<sup>cloud</sup>



# Whitepaper:

How to Maximize the Cloud without Throwing out Existing Hardware

[www.veset.tv](http://www.veset.tv)

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## Introduction

There is no doubt that moving to the cloud for video workflows brings a number of significant benefits. This includes efficiencies, flexibility, scalability, and if done well, cost savings. However, many existing broadcasters have huge existing infrastructures in place that still work reliably and well. Completely removing and replacing all of that existing hardware for every part of the workflow would be time consuming, expensive and difficult to justify. In an industry that is trying to reduce its environmental footprint, throwing out everything before its end of life is also a waste of resources.

How can video providers manage that complexity while ensuring they keep the same level of high quality for consumers?



## Cloud Benefits and Developments

Over the last few years, the number of cloud-based solutions and services on the market has grown hugely. This means that media companies have a lot more choice over how they operate their workflows in the cloud. When it comes to assessing the merits of different solutions, it is worth being aware of the difference between cloud and virtualized solutions.

There is no shortage of applications on the market that allow software to be remotely accessed using a virtualized server in a data center. While like the cloud, the process of virtualization allows remote access, it is not the same as a cloud solution, and does not provide the same benefits. There is also another important distinction to be made and that is between cloud-native and cloud-ready solutions. Cloud-native solutions are born in the cloud, as opposed to cloud-ready solutions which are existing solutions that are adapted for use in the cloud.





Unlike cloud-ready solutions and virtualized applications, cloud-native solutions use multiple microservices and deployment tools such as Amazon ECS, Istio and Kubernetes. It is the use of these kinds of tools that enable automatic scaling to meet demand and high availability. Operators stand to gain the greatest benefits when using cloud-native solutions.

Whatever the size of your broadcast or video business, cloud-based working can help to make your operation more efficient, flexible, scalable, and cost effective. Let's explore these benefits in more detail, starting first with efficiency.



## Efficiency

Video production and delivery has become increasingly complex and relies on input from and collaboration between many different teams, services and media professionals. Cloud-based working allows for remote yet collaborative working, enabling high levels of interaction—without the need for media professionals to be in the same room, or even in the same country. Media professionals can easily and quickly access content in the cloud as and when needed, and cloud-based workflows are not location dependent. This makes for a much more efficient way of working.

Many of the delays and bottlenecks seen in traditional broadcast workflows are not felt or are minimized with cloud-based working. Cloud computing also provides intelligent management and analytics tools so that systems and workflows can be optimized for efficient, streamlined working.



## Flexibility

As the industry has discovered over the course of recent years, being able to operate in a flexible way can really make or break a business. In contrast to traditional on-premises set-ups, which tended to involve proprietary hardware-based solutions, cloud-based solutions tend to be highly interoperable. The ability to easily select and change components of the workflow to ensure that each solution meets a business' exact needs is a valuable advantage of having a cloud-based infrastructure.

Companies are no longer limited to working with certain types of delivery networks or formats because of their hardware or software. There is also an element of future-proofing because new technology is far easier to incorporate if you don't have to physically replace all of your existing hardware.





## Scalability

As demand for content has increased and the video industry has become ever more complex, the need for an infrastructure that can keep up with demand and manage content delivery at scale has become increasingly apparent. To deliver what consumers want when they want it, media businesses need to be able to respond quickly to change, adapting as industry and business needs require.

Cloud-based working makes it easy to scale up/down as necessary, and this brings obvious commercial benefits. With playout for example, broadcasters can easily launch new channels, whether this is to reach new target audiences or to expand into new regions.



## Cost savings

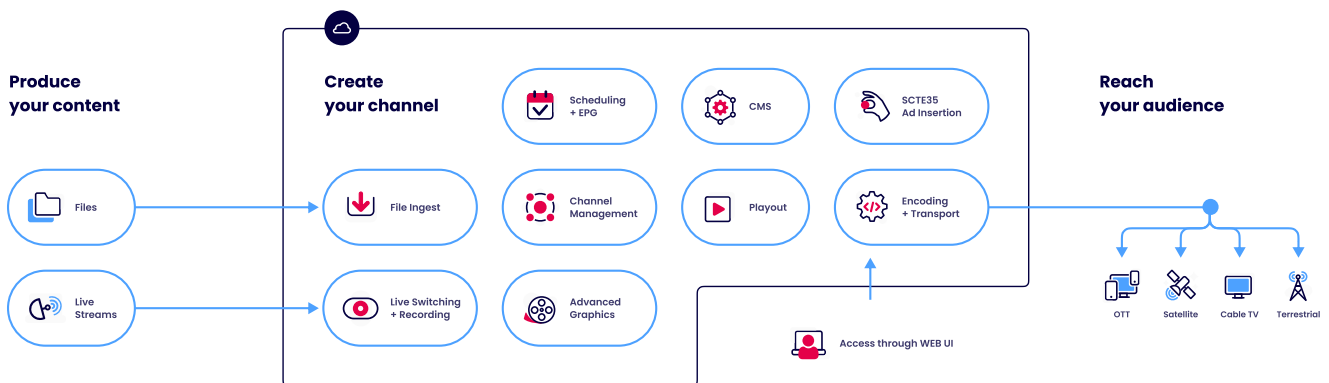
The very nature of cloud-based working makes it cost effective for several reasons. Basing operations in the cloud removes the need to maintain physical infrastructure and costly, complex hardware. Added to that, ongoing operational costs are also lowered because, generally, cloud-based infrastructure tends to work on a pay-as-you-go basis, so you are not paying for services you're not using.



## Traditional Broadcast Workflows

As with other technologies, digital video workflows tend to evolve over time. Seldom are there revolutions where everyone makes a drastic change all at once. Traditional broadcast workflows are often unique to organizations and carefully architected by workflow experts to meet their specific needs. Often, expensive investments have been made into hardware, including servers and storage infrastructure. And, while it may sound like a good idea to move everything to the cloud, this is not necessarily practical for some organizations due to cost, security and compliance concerns.

Additionally, from content creation to delivery of the final product, the film and music industry requires protection of digital assets as well as a shroud of confidentiality to protect their investment. Therefore, some organizations prefer to use onsite resources for security and speed of processing, but also require safe and secure off-site backups.



## The Sustainability Role for the Video Industry

*Sustainability can mean “the ability to be maintained at a certain rate or level” or “avoidance of the depletion of natural resources” according to Oxford Languages.*

In the video industry, the first definition is appropriate for the business continuity and software perspective. After all, the ability to keep eternal archives of digital files and to be able to access those files for further use—either as is or to incorporate it into new projects—is paramount in making full use of content. It is also one of the most accurate ways we have to preserve the history of our society and the art created in the entertainment industry.

However, the sustainability for video content can be plagued by compatibility issues, starting with camera formats and extending to encoding and decoding (codec) technology. For this reason, it is important to have trusted providers that not only focus on making advances in technology, but who maintain a library of software solutions that enable continued access to your content. An example of this is MainConcept, which has developed and maintains the most comprehensive library of professional

encoding and decoding solutions along with a bench of expert engineers available for professional consulting engagements as well as product support.



From the environmental perspective, sustainability is something we are becoming ever more aware of. Our landfills are bulging not just with trash but with perfectly usable items that have been discarded while they still have usable life. The saying “reduce, reuse, recycle” comes into play here. How can you reduce your hardware investment, reuse or repurpose hardware and then recycle it once it has outlived its life span? While that topic is outside the scope of this paper, it is one that is heavy on the minds of society today and bears careful thought.

In addition, globally, we use energy to power devices and to keep server rooms and data centers at a proper temperature. Using cloud-based resources somewhat alleviates these concerns as a purpose-built cloud data center tends to be more efficient. So, obviously, the tipping point of when and how to make the move to cloud will be determined by many factors unique to an organization.





## When Does True Cloud Make Sense?

When deciding whether a partial or fully cloud-based infrastructure is right for your company, there are a number of key factors that need to be considered.

### Is your business established or just starting up?

*If you are just starting out or about to build new infrastructure, then it may be a good time to establish a cloud-based operation. It is generally easier to start from scratch in the cloud, than move operations from a traditional on-premise set up to a cloud-based infrastructure.*

### What stage of life is your hardware at?

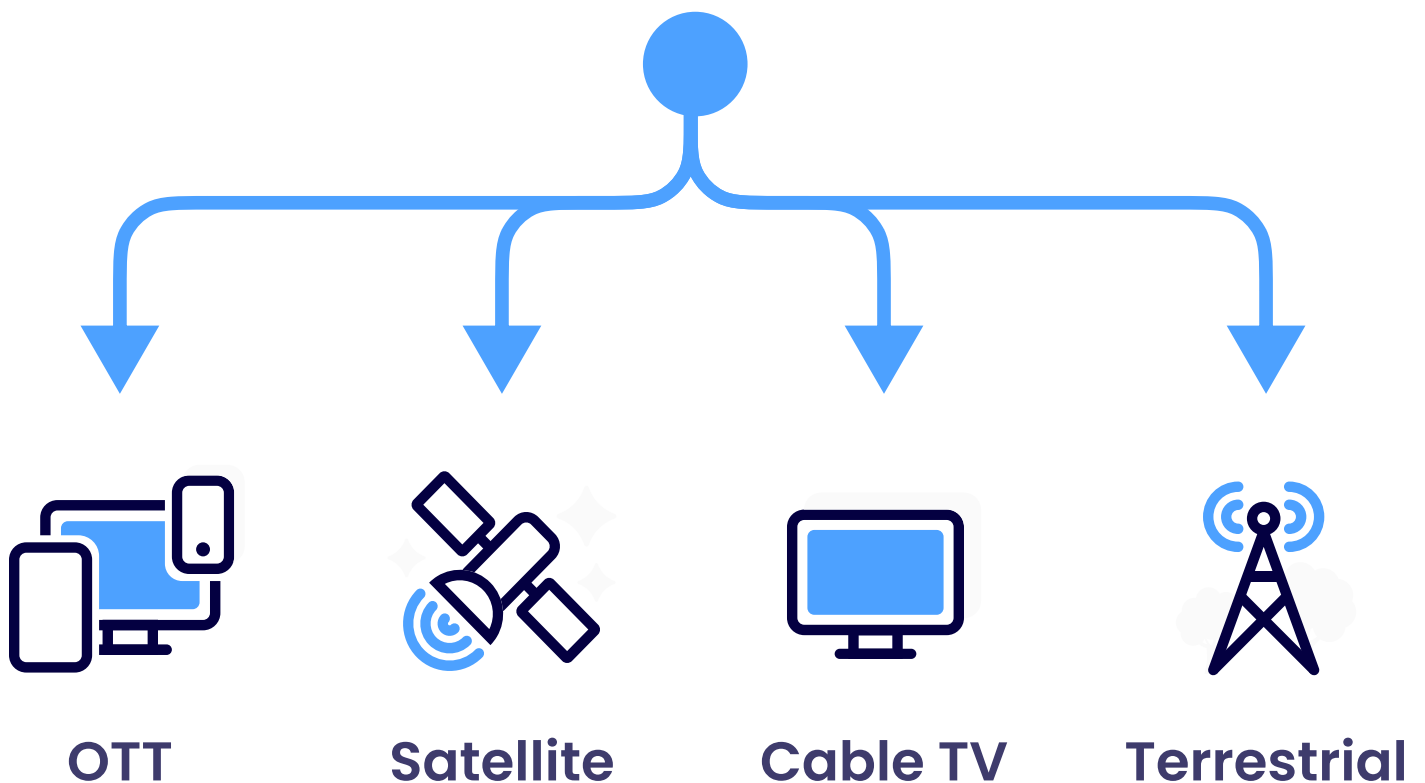
*If your hardware is relatively new, it will most likely make sense to continue to use it. If, on the other hand, your hardware is reaching the end of its life, cloud-based solutions and services may well be a better option than replacing the outdated hardware with new hardware.*

### Is your hardware able to cope with next-generation workflows and demands?

*If your hardware is operating effectively and still meeting your requirements, it may make sense to continue using it until that is no longer the case. However, if your hardware is no longer able to meet your needs, or is showing signs that it will soon not be able to meet your requirements, a move to the cloud may well be the right choice.*

## How can the two co-exist without losing those benefits of both?

While the greatest benefits are gained from employing cloud-native solutions and operating an entirely cloud-based infrastructure, this is not always practical or feasible. For those attempting to make a gradual shift to the cloud, part of the solution is having the right expertise and the right software. This may require a reimagining of media workflows, but it is possible to adopt a hybrid cloud/on-premises model so you can halt the spend on new hardware while you start to realize the benefits of the cloud. The key to incorporating cloud services into a workflow is ensuring that the services or solutions are seamlessly integrated into all existing parts of the workflow, both hardware and software.



## Tips to achieve better integration

Here are some tips to achieve a more seamless integration:

- 1. Plan carefully!** Before making any changes to existing workflows or infrastructure, make sure you fully understand the impact this will have. Test to make sure that a service or solution is the right fit and will integrate well with your existing structure before investing in it. Engage with professional consultants if you do not have the expertise on staff.
- 2. Choose which workflows you migrate wisely:** Some workflows, such as those that are self-contained, will be more suited for moving to the cloud than others. Analyze how each part of your operation works so that you can identify which workflows will be the simplest to move.
- 3. Take an incremental approach:** It is more manageable to ensure all systems are properly integrated if you move one part of the workflow to the cloud at a time. This approach also makes it easier to identify and manage any unintended consequences.
- 4. Be patient:** As the proverbial saying states, "Rome wasn't built in a day." Your journey to the cloud will probably be an ongoing process. Take it slowly, learn from experience, and work to continuously improve it as you go along. Make sure you have the right expertise engaged from your staff and vendors or professional consulting resources.



## How Veset and MainConcept are Working Together

Veset has integrated MainConcept products to ensure compliance with more traditional hardware systems and analysers. This includes OTT Content Creation for GStreamer and the HEVC/H.265 and AVC/H.264 Encoder SDKs.



Veset's cloud playout platforms enable video providers to create and manage live channels. It offers two main solutions: Veset Stratus, a more simplified channel management platform, and Veset Nimbus, an enterprise-level cloud playout solution which enables advanced channel management.

MainConcept provides video and audio codecs, plugins, and applications to the production, streaming, and broadcast industries. With their software, customers are able to distribute channels to any broadcast-grade distribution platform, including satellite and cable.

MAINCONCEPT



## About Veset

Founded in 2011 Veset [www.veset.tv](http://www.veset.tv), is a technology disruptor in linear television playout space. Veset was one of the first to deploy a native AWS-based linear channel management platform for video content owners. Veset is focused on self-service SaaS, its products Veset Nimbus and Stratus are available to customers directly, including through AWS Marketplace, or via technology and broadcast service providers. Veset operates globally with customers based in over 20 countries. Veset is headquartered in the United Kingdom with a subsidiary in Latvia.

## About MainConcept

Since 1993, MainConcept has provided best-of-breed video/audio codec solutions for professional video production, multimedia, broadcast, digital signage, gaming, medical and security industries. Our software development kits, transcoding applications and plugins are used across industry verticals to meet an ever-expanding list of use cases. With world-class engineering, exquisite attention to detail, and best-in-class support and professional services, we are constantly innovating to deliver the simplicity needed with the customer experience you deserve. MainConcept codecs are engineered to surpass the challenges of even the most demanding use cases and are used by organizations such as Adobe, AVID, Autodesk, Corel, Dalet, Endeavor Streaming, Grass Valley, MAGIX, Nikon, PlayBox Neo, Sony and Veset.. For more information, visit [www.mainconcept.com](http://www.mainconcept.com).