



Planning Guide:

Choose the Right Playout Deployment Model for Your Business

Introduction

Playout is the focal point for content monetization for most broadcasters and many other media companies. Critically important in the broadcast workflow, content playout defines the opportunity for reaching a specific viewing audience.

Today, competition from internet-enabled, alternative content channels such as OTT and on-demand libraries is challenging media companies to quickly and cost-effectively turn up new channels to keep pace with a rapidly changing industry. While technology transitions such as the move toward IP-enabled, virtualized and cloud-based operations present new opportunities for content playout, each transition comes with its own challenges, rate of adoption and revenue expansion prospects.

As the industry continues to evolve, how do you ensure that the technology investment you make today will not only support your current playout requirements, but also enable you to make a disruption-free transition to next-generation channel launch?

In this Guide, we will discuss the challenges today's media organizations face in implementing competitive channel playout operations. We will compare the benefits of on-premises, hybrid and fully cloud-based channel playout deployments, and help you determine which model is right for your business. Finally, we will highlight a pioneering, software-based playout solution that enables you to transition to cloud technology at whatever pace works for your business.

A hand holding a remote control against a blue-tinted background of a crowd. The image is overlaid with a white rounded rectangle containing the title text. An orange vertical bar is positioned to the right of the white rectangle.

A Transitional Time for Playout

The Challenges

The trajectory of the broadcast industry is toward a broader business landscape that enables more channels and greater mobility for the consumer, driving more revenue for the content owner. As a counterpoint to this opportunity, changing requirements such as resolution, framerate and the move to high dynamic range — coupled with new infrastructure technologies such as IP networks, commercial off-the-shelf (COTS) compute and hosted, and cloud environments — present more choice and complexity than ever before.



The first step toward seizing today's opportunities is the transition to IP video technology and COTS compute, which can significantly accelerate the deployment of new linear and multiscreen channels. The transition to IP alone allows you to implement a more dynamic media network environment.

The move to COTS provides a roadmap to flexible processing and dynamically deployed virtual services, which in turn allow you to redefine how you leverage the IP network.

The two technologies together open the doors to integrating enterprise-class technology to manage network operations and more easily take advantage of tools designed for and tested in telco-grade environments. In short, the combination of IP networks and COTS compute brings the broadcaster into parity with the larger telco markets — dramatically affecting costs, creating more operational transparency and accelerating time to revenue.





The Solution

Imagine Communications developed [Versio™](#) to address the challenges presented by the multiple changes in network and delivery formats and distribution topologies demanded by today's consumer. Designed from the ground up as a [microservices-based](#), software-defined, fully IP-enabled content playout solution, Versio enables media companies to leverage one platform to support all their current and future playout requirements.



Versio is adaptable to any operational model or architecture — from traditional, integrated playout appliance to premises-based COTS hardware to a fully virtualized or cloud-enabled model.

Whatever your operational environment, Versio can support it. The uniquely flexible platform can run as a traditional integrated channel playout device on-premises with SDI I/O, in a hybrid SDI/IP deployment, or in a datacenter as a cloud playout solution with IP I/O. In the datacenter, Versio can run on COTS hardware or, for increased flexibility, in a virtual environment.

By enabling a hybridized playout environment that uses the same software for premises- and cloud-based implementations, Versio makes it possible for media companies to maximize existing investments, while making a gradual, disruption-free transition to the future of channel launch.

Which channel playout deployment model is right for me?

The choice to launch a new channel today requires consideration of all of the potential deployment topologies, including cloud, hybrid and private (on-premises) infrastructure. The tradeoffs between cloud, hybrid and on-premises are complex, and it is not always obvious why you would choose one over another.

See the playout deployment choices of these global broadcasters.



Traditional model



On-premises

Appliance development with SDI I/O connectivity

Applications

OS & middleware

COTS hardware

Preparing for IP



Hybrid

Mixed environment with both SDI & IP connectivity

Applications

OS & middleware

COTS hardware

Fully virtualized and operating from a private or public datacenter



Cloud

IP I/O on COTS hardware or virtual machines (VM)

Applications

OS & middleware

COTS hardware

Local (physical)

Cloud (virtual)

When do I want an on-premises deployment?

Deploying channel playout operations on-premises allows you to tightly control the architecture of the service, enabling an optimized service (infrastructure + software) design that would seem to give the operator the greatest return on the investment. Of course, this only works when you can commit to the service for the number of years required to ensure an adequate return.

Another consideration is local control and monitoring. A locally deployed, on-premises system will allow a design with the greatest interactivity — delivering low-latency response in a high-touch, live production environment. It would seem, therefore, that an optimized, on-premises solution is the natural choice for most broadcasters, especially in live production.

However, when you factor in the costs of service delivery, business continuity power, cooling, rack space and even real estate, the right choice may include other technologies such as public/private cloud — trading costs for flexibility and on-demand capacity. Fortunately, the decision to deploy on-premises need not lock you into a particular path, as long as you choose a technology that is portable to the deployment environment and flexible to the target topology.



Benefits of on-premises deployment

- Lower upfront cost
- Traditional knowledge base
- Guaranteed resource allocation
- Efficient resource utilization



What else should I know about on-premises?

Because new channels need time to mature and build revenue streams, another challenge is to find the most efficient method for broadcasting — and this is where integrated playout solutions come into prominence.

Opting for a fully integrated channel playout solution eliminates the costly technical and logistical obstacles associated with the “standard” approach of installing and operating multiple single-function appliances. The “all-in-one” capability of an integrated playout system that offers SD or SD/HD playback with built-in automation and branding enables organizations to quickly and cost-effectively launch new channels even in an all on-premises scenario.

With a 1RU [Versio](#) system, users can choose from a variety of software-licensed keyed options to enable live input, DVE functions, baseband ingest, scheduled record, external device control and a broad range of codecs and workflow tools. The software licensing allows for quick and easy technology refreshes and/or additions of new features anytime business needs evolve.

Software-oriented options for redundancy significantly improve uptime and reduce on-air errors. In multichannel deployments, each channel can be controlled and monitored under a single automation user interface for maximum flexibility and control. Most importantly, the Versio system's software-defined architecture enables true service portability — allowing you to move your channel from on-premises to cloud simply and easily.



Physical server

- Operating system directly on hardware
- Dedicated resources to OS
- Hardware-specific drivers
- Installed OS & applications



Benefits of hybrid deployment

- Lower total cost of ownership
- Efficient resource utilization
- Highly scalable
- Resilient to failure
- Rapid deployment
- Dynamic & elastic

When do I want a hybrid deployment?

We have already covered the hybrid network that is part IP and part baseband, but the second consideration is the hybrid deployment model. This is the model that moves you from on-premises to hosted, private or public cloud environments. The goal is not to solve issues of technology, but rather to address business issues — whether it is disaster recovery (DR in the cloud) or burst capacity (cloud expansion).

Building a hybrid system starts with the move to IP and COTS. You must be already part of a software-defined environment and built on virtualization before you can really take advantage of a hybrid deployment model. An environment based on Software-Defined Networks (SDN) and integrated, software-defined playout enables you to support the traditional needs of master control operations today, while investing in a system that will be scalable and evolve your business model into the future.

By using a hybrid-ready system as a steppingstone, you can seamlessly adapt to IP and cloud-based playout at whatever pace works for your business.

What else should I know about hybrid?

The infrastructure that drives the hybrid deployment can easily be a mix of physical, virtual and even hosted or cloud-based, provided that you have committed to an evolution of the network to IP and COTS, which will enable you to more easily take advantage of these new deployment methodologies.

The hybrid model reduces complexities with its software-defined infrastructure, lack of application-specific hardware and reduced interconnects. Running channel playout operations in virtual machines allows you to repurpose the hardware as and when needed, seamlessly move between channels and easily and cost-effectively expand the system to manage future playout requirements.

The Versio modular playout system is a 100% pure software solution, enabling GPU acceleration as and when desired. In a hybrid deployment, Versio can be installed on a bare metal server and can enable baseband I/O or IP I/O to meet any current or future playout requirements.

A Versio solution can be deployed in a traditional baseband environment or in an environment that will be upgraded to IP at some point in the future. With a Versio system, you get a high-performance, known and tested platform that allows you to transition at a comfortable pace to next-generation IP playout.



Server virtualization

- Abstraction of underlying hardware
- Resource pooling & dynamic allocation
- Configuration over installation
- Transportable containers



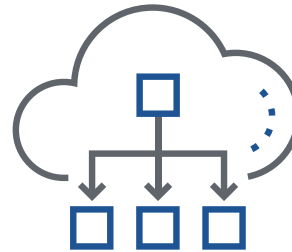
When do I want a cloud deployment?

As media companies face growing pressure to economically launch new channels, while protecting and extending their long-established brands, the new generation of automated, cloud-based playout will play a critical role in meeting these strategic objectives.

Cloud deployment offers the most direct opportunity to scale on demand, fulfilling the need for specialty, event or other pop-up channels. It provides a framework for experimentation with new revenue models and an easier path to new and emerging markets than traditional satellite or other distribution models.

A playout solution deployed in the cloud allows media companies to ingest, transform and transport content free of geographic boundaries, expand their brands and forge productive new relationships between content providers, broadcasters and more.

For any forward-looking media company looking to streamline geographically dispersed operations, eliminate costly dependence on physical playout facilities or cost-effectively spin up specialty channels for micro-regions or specific demographics, a cloud-deployed playout solution gives you the agility you need to compete in a changing marketplace.



Benefits of cloud deployment

- Managed environment
- Massive economies of scale
- Elastic scalability
- Rapid deployment
- Resilient
- Geo-diversity
- Low/no barrier to entry (public)

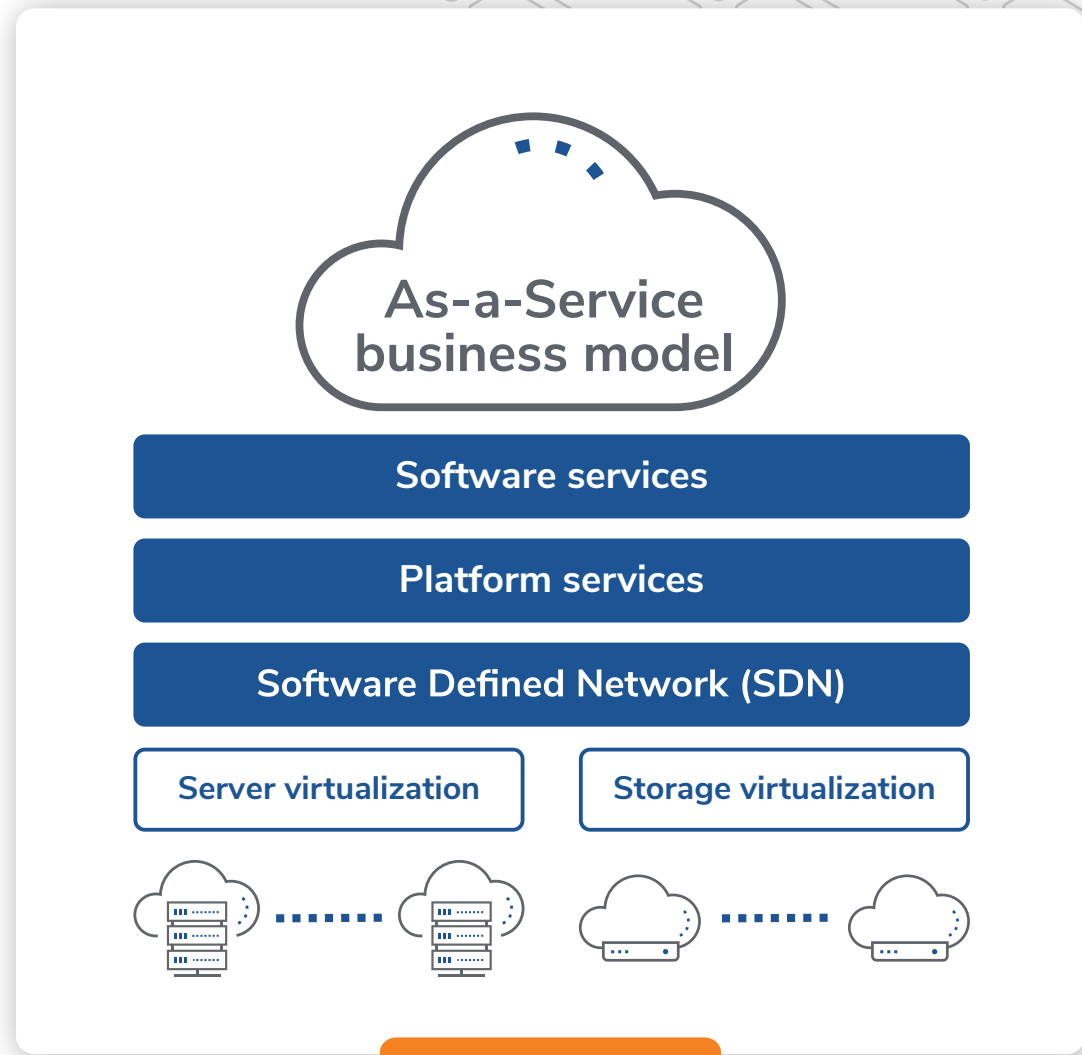
What else should I know about cloud?

Playout in the cloud is inherently IP and COTS based, and presumes that content is transited over IP, managed by software and stored in the cloud. Cloud storage is not the least costly option, but it is the surest way to get true service diversity and robust storage for critical content.

When considering [cloud cost](#), it is essential to factor it against the total cost of ownership (TCO) of a truly comparable on-premises solution. Most of today's tier-1 cloud solutions offer redundancy and capacity that simply cannot be matched by any private enterprise.

Once you factor in the complete TCO analysis of a comparable on-premises solution, including power, cooling, network, compute, storage and staff, the prospect of a cloud solution becomes a lot more reasonable. On top of this, you have access to the pure capacity of the cloud environment, which allows greater access to content, faster integration of external services and more scale to solve problems, as well as professional support from cloud-specific IT staff.

Perhaps the most important benefit of a cloud playout solution is the metered and opex-oriented cost structure. You pay for what you use.





End Game: Benefits of Payout in the Cloud

Playout in the cloud provides media companies with very real business, market and competitive benefits. The innate flexibility of a cloud-based architecture allows media organizations to create channels on an anywhere/anytime basis, with considerably lower barriers to entry versus traditional means of turning up a new channel.

Other benefits include improved visibility to optimize advertising playout; efficient methods of disaster recovery to ensure business continuity; fast channel creation to accommodate seasonal or one-time events; the expansion of brands and content into new markets and new geographies; and a pay-as-you-go Platform-as-a-Service (PaaS) model to greatly lower the cost and time barrier associated with traditional methods of establishing a channel.

Virtualized playout operations enable you to run a centralized and localized playout network from one location and invest the cost savings in compelling, revenue-generating new content. And with channels no longer tied to localized, heavy-metal infrastructure, content can be edited, processed, branded and played out with the speed and agility that only the cloud can achieve.

Most importantly, cloud playout and distribution places traditional media companies in an advantageous position relative to their internet-based competition. Traditional media companies can leverage a more mature business model with a proven track record of revenue generation together with the scale, reach and dynamics of their internet-based new media competition — all while incurring the same cost structures. Greater revenue opportunities, equal reach, same cost structure.

“If we needed to quickly set up a channel for a specific event, such as a local election, or to ensure business continuity in the event of a service disruption or to start a completely new channel in a short window of time that traditional hardware infrastructure does not allow – we could do so quickly using the Versio virtualized solution.”

Tarek Majdalani, Director of Engineering and Operations, Alrai TV

Conclusion

As linear ad revenue continues to decline and media organizations face pressure to deploy more specialty channels at a lower cost, transitioning to agile IP, virtualized and cloud-based technology is becoming a critical consideration to remain competitive in a rapidly changing market. However, moving operations to a datacenter environment — whether private or public — is still a major step for most broadcast organizations.

Choosing a playout solution that supports a phased approach to next-generation technology allows you to sustain current operations, protect your investment and make a seamless transition at a pace that works for your business.

Versio is that solution.

Combining best-of-breed ingest, automation, branding, graphics, file server, storage and master control capabilities in an entirely software-based environment, Versio thrives in any operational environment from traditional, integrated SDI playout to a fully cloud-based deployment and supports any-to-any transport, including compressed (TS) or uncompressed IP ([SMPTE ST 2110](#)).

By enabling a hybridized playout environment that uses the same software for premises or cloud-based implementations, Imagine Communications has made it possible for media companies to maximize existing investments while making a gradual, disruption-free transition to the future of channel launch.



Check out how [Sinclair Broadcast Group](#) took the first step to cloud playout. →

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