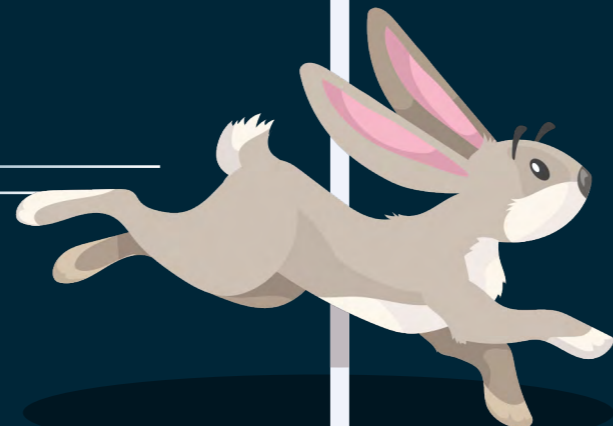# BE SLOW AND STEADY IN YOUR TRANSITION TO THE CLOUD

The mad dash to cloud can be taken in easy, sensible steps that suit a broadcaster's own pace

ROHDE & SCHWARZ

CLOUD

The pandemic has been hugely disruptive to our industry. The shutdown of many facilities meant workarounds using internet technologies outside the bounds of SDI or IP gold-standard ST 2110. Technologies with the potential to lower capital expenditure (CapEx), boost efficiencies and scale operations have been fast-tracked for essential business continuity. Cloud has become a panacea for broadcast's future in the here and now.

As society emerges blinking from the cave, however, we should take time to plan our next steps. There should be no blind rush towards technologies that don't fit our financial or business goals.
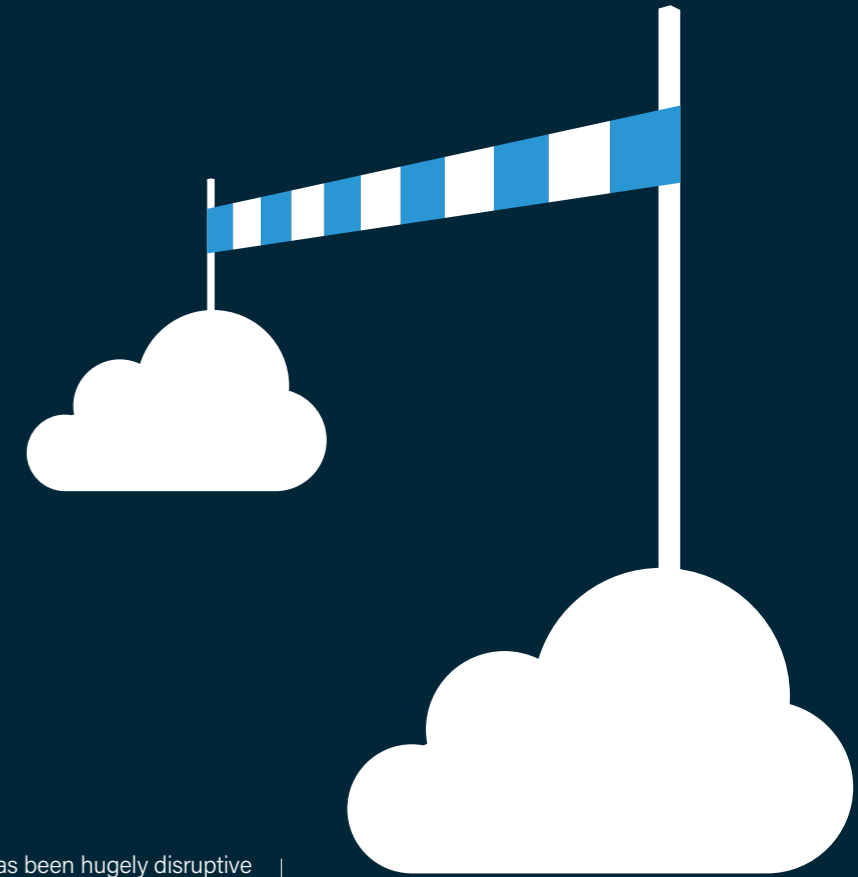
In short, take a deep breath in and out. There's no need to panic.

IP STILL IN TRANSITION
Traditionally, the TV industry has run on purpose-built systems, created to handle video, with the 'as-a-service' consumption model used for playout and other content distribution processes. But this was already changing before Covid-19.

Data from the 2018 Devoncroft Media and Entertainment Cloud Adoption Index projected that the sector's cloud usage would rise by 88% between 2016 and 2021. Covid-19 accelerated that outlook.

The embrace of cloud offers advantages, but we should realise that it is not – and probably never will be – a one-size-fits-all solution. Deployments of ST 2110, paused along with other major investment projects this past year, have not lost their business rationale overnight. Just as every broadcaster has a unique set of business and operational requirements, the pace of each broadcaster's migration to IP and cloud will also be unique.

The nuances of this business challenge are getting lost in the headlong rush to cloud. Certainly, the broadcast and media industry must recalibrate for a new approach to acquiring and deploying technology. Large CapEx is being replaced

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by operating expense (OpEx) budgets that are more flexible and aligned with the operational requirements of broadcast facilities.

Using the cloud for remote production is certainly one application with many advantages, including flexibility and the ability to scale up and down quickly, but it may not always be the financially sensible option. Existing investment made in TV technology runs into the hundreds of billions, and broadcasters can continue to sweat these assets for a significant amount of time. Operators may find that some processes are still more efficient, faster, cheaper, and provide larger capacity via local, specialised hardware.

Nonetheless, the hardware restrictions of the past have been removed by the software and increasingly available COTS solutions. The transition to IP has been rightly heralded as a game-changer. Flexible and scalable infrastructures are achievable, giving broadcasters unprecedented choice.

THE POWER OF CHOICE

This choice includes cloud. These days, CTOs must be able to move any process to any infrastructure at any time – whether that is rewiring a studio with ST 2110, moving channels to private data centres, relocating workflows to the public cloud or any hybrid combination.

IP means freedom from the hard-wired silos of SDI. It means frictionless interoperability of best of breed applications. The last thing broadcasters want is to trade the vendor lock-in

TECHNOLOGY THAT PROMISES CLOUD AGNOSTICISM HAS TO BE A PRIORITY

of the past by ceding control to a single cloud provider. No matter how large, no provider is immune from business failure. Spinning up and down services on-demand with fees only for usage is a tremendous development, but the costs of ingress, egress and transport around the cloud offer no long-term guarantees.

Technology that promises cloud agnosticism has to be a priority. Above and beyond this, the industry should be working towards finding commonality of interests for working with multiple clouds, standardising the exchange of data and protocols.

The pan-European Gaia-X initiative (**data-infrastructure.eu/GAIAX/Navigation/ EN/Home/home.html**) points towards this goal. The project envisages an open, transparent digital ecosystem, where data and services are available, collated and shared in an environment of trust.

Choice can also mean true cloud-native software applications. Cloud-enabled approaches will work on COTS, but have not been built from the ground-up to maximise the compute power of virtual machines. Consequently, the ability to swap, mix and architect tailored systems per workflow, channel, station, per entire studio over IP and in the cloud will falter.

There is a need for a more agile approach, grounded in decades of trusted engineering.

NOT REMOTELY BETTER? R&S offers a flexible approach to adopting IP-based workflows, ensuring an effective transition

CLOUD

TRUSTED PARTNER

Rhode & Schwarz has decades of experience in broadcast and media, using its deep understanding of how production, playout and distribution has worked in the past to innovate foundational solutions for the IP and cloud-based future.

Its technology solutions are deployed extensively for mission-critical use by high-profile broadcasters worldwide. Rather than throwing that legacy out overnight, customers are partnering with R&S to access its vast knowledge to innovate their infrastructure and workflows – at their pace – to leverage the benefits IP and cloud can offer.

Built on a modular architecture based on five core technologies – video server, playout, storage, multiviewing and monitoring – solutions are designed to directly address many of the issues that complicate common IP, cloud and hybrid deployments.

R&S allows teams to create customisable workflows, with a variety of apps that can be quickly and flexibly deployed. This modularity is a key component in any broadcaster's ability to scale.

For example, the new Scalable Distributed Multiviewer (SDM) feature offered within R&S Prismon enables any input to output connectivity through IP proxy networks, for up to 36 server instances. Users can render a view with multiple UHD inputs – beyond the decoding capacity of a single system.

THE TRANSITION TO IP HAS BEEN **RIGHTLY** HERALDED AS A GAME-CHANGER

In addition to this increased flexibility, the new function addresses other common issues found within IP-based production and distribution networks, such as resource allocation.

ASSET UTILISATION

Asset utilisation is notoriously low in the broadcast industry. The sector talks about making the most of hefty capital outlay, yet typically 70% of the time, an asset sits in a rack unused. It's an extremely expensive, highly inefficient model, especially with an alternative at hand. It brings answers to the question of why pay 100% up front when you only use 60% of the features, 40% of the time.

The latest version of Prismon (combined monitoring or multiviewing application) requires significantly less CPU power and fewer decoding licences. The SDM feature also provides higher network flexibility and is part of a series of new tool sets, allowing a large number of Prismons to be configured through a centralised control user interface – the Multiviewer Control Center. This innovation satisfies studio galleries and master control rooms looking to migrate to IP-based workflows.

Rhode & Schwarz software defined, virtualised solutions unlock the efficiencies of elastic compute in clear, steady steps, from SDI to IP, on-premise, in a data centre, or in the public cloud.