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Who needs the NEWS?

Cloud Payout Time

Igor Krol, CEO of pioneering Cloud payout provider Veset, shares his views on key questions related to Cloud payout, as well as the overall evolution of the industry.

How do you define Cloud payout and what is the difference between this and virtualisation?

One of the misconceptions in the broadcast industry has been in defining the Cloud as nothing more than a remotely accessed 'virtualised' server in a data centre. Virtualisation and the Cloud are separate technologies, albeit with similar goals – to provide a way to run multiple software processes on the same hardware, thus increasing the mean-average hardware resources usable at the same time, and making sure that the available hardware is used to its full potential.

Virtualisation does not deliver elasticity and pooling comparable to Cloud technology, and therefore demands substantial commitment of IT and engineering resources to manage virtualised applications and the hardware that hosts them. Virtualising applications often originally developed for proprietary systems including GPUs is a challenging task and often requires specialised hardware/servers, which are not plain vanilla Cloud resources. This approach does not allow users to extract maximum benefits from ever-falling Cloud resource costs.

Another misconception is to categorise 'edge' payout as Cloud payout. Edge architecture is currently the most popular payout marketed as a 'Cloud' option mainly due to the fact that existing head-ends still resist accepting IP feeds and rely on ASI or SDI. However, it still requires installation of a physical server, which is remotely accessed through a user friendly interface. From our perspective, it is a stretch to call it a Cloud payout, as the actual payout

software resides on standalone hardware, not on a virtual machine in a secure datacentre operated by Amazon or other reputable Cloud resource provider.

What are the key directions of evolution of so called 'Cloud payout'?

Veset developed when the company's founders realised that virtualising existing software solutions is not good enough to harness fully Cloud technology and resources benefits. We also believe that service embedded in the public Cloud and a software-as-a-service offering should have a massive efficiency and value creation impact on the entire payout operation.

Veset was founded in Latvia, the country which is consistently in the top 10 in terms of quality of the Internet. For us, it is only natural not to be afraid to have all of parts of the workflow in the Cloud because we have a lot of trust in the Internet and such Cloud providers as Amazon Web Services. For some time, with the right technology such as one of our partners Zixi, we have been able to distribute feeds created by our payout in the Cloud to every location in both developed and emerging markets using IP. This also brings substantial savings vis-a-vis satellite and fibre-enabled distribution.

We strongly believe that in order for linear television to survive in any shape or form, it has to embrace Cloud and IP immediately, not through a five-year plan. The Internet and the Cloud has swept away many industries; linear television has no reason to believe it is an exception. Full Cloud payout is one of the answers for the industry's challenges.

Do you see a lot of competition in the Cloud payout space and how do your competitors position themselves?

If you walk around IBC or NAB, you will be under impression that pretty much every



technology vendor offers 'Cloud-enabled' or 'Cloud-based' solutions. However, if you scratch the surface, more often than not, you will find some proprietary hardware, GPU cards, and SDI, hidden under the bonnet. There is actually very little supply of true Cloud solutions, developed from scratch to maximise the benefits for the users. It is sad to see that many vendors stick to what they know or have, and instead employ marketing gimmickry to be on top of key industry trends. We find that clients are often confused, but ultimately they see through that marketing veil.

This is not to say that there are no other players who are serious about developing payout leveraging Cloud resources in some form.

Different players approach the market from different angles. On one hand, some of our Cloud payout competitors come from markets with very low quality Internet as well as low-cost engineer resource. Their legacy of poor Internet and relative abundance of human resources has resulted in the development of a quasi-Cloud solution with heavy reliance on so-called edge architecture. While Veset's software approach also allows for payout to be deployed on the edge servers, we are no big fans of such architecture. As mentioned above, technically speaking, 'the edge' is not in the Cloud.

In our opinion, managing disparate hardware infrastructure scattered around the world requires substantial engineering resource commitment. Even if engineers managing that are outsourced to low cost regions, infrastructure will become unwieldy and unsustainable in the long run. We believe that Cloud and Internet costs will go down, whereas engineers can be deployed for other tasks and their costs are unlikely to go down in the future.

Elsewhere, a few established payout technology vendors are trying to adapt their edge payout boxes to the Cloud. A few are trying to virtualise and move what they have to be able to run it in the public Cloud. However, it seems that their attachment to legacy technology and in particular to uncompressed/SDI-driven thinking does prevent them from



breaking the link with the past and addressing rapidly evolving client demands.

Whilst it is understandable that SDI will not disappear overnight, we do not see the reason to hang on to it when there is so much investment going into encoding and IP transport software.

Many vendors are caught in an old business model of supplying boxes. The Cloud-driven new business models such as SaaS shift emphasis to service. What is the impact you see in the case of payout?

Pre-Cloud, there were three main options for dealing with payout available to broadcasters: (1) Managed Service, (2) Hosted Hardware with Remote Access, and (3) In-house hardware ownership.

Software-as-a-Service brings a new dimension to the service element. In simple terms provision of 'service' is directly linked to engineering human resource. With SaaS the user benefits from two levels of service.

One is provision of service by the public Cloud. Such computing resources are not free but they bring the whole host of 'service' value by the most technologically advanced players such as Amazon, Google, and Microsoft. They are able to hire the best engineering talent and invest in security and Cloud technology on an unprecedented scale. No single media organisation will have that financial resource. As a user of a Cloud payout, you directly benefit from that service element, not just hardware purchasing economies of scale.

On top of the embedded service of the Cloud, SaaS providers such as Veset, add an additional layer of service by providing 24/7 maintenance of its software on the Cloud platform and guaranteeing its availability according to SLAs. Furthermore, a SaaS provider can offer its clients support in dealing with one-off set-up needs.

We expect that traditional hosted hardware and in-house ownership models will be replaced by SaaS, while managed service

providers will also adopt SaaS to build their value added services on top of it.

But broadcaster engineers are concerned that they will lose control?

If you remember there were times when everyone used Microsoft Exchange servers to manage their corporate emails and CRMs where running on in-house hardware. Now we have Cloud-based Google mail and Salesforce. Certainly payout is mission-critical and even small disruption can cause substantial losses, however control and confidence come from understanding how IP and the Cloud technology works. It is through such skills

that broadcasters can come to feel comfortable with adoption of the new technology.

On a more micro level, lack of control can be addressed by high level of monitoring capabilities offered by the Cloud-based solutions. A combination of monitoring and the high redundancy nature of the Cloud provide a high level of control, but is it different from the ability to press the restart button on your own server. On the IP transport side, every point from the payout output in the Cloud to its ultimate handover to distribution feed points can be also automatically monitored.

For example, we would monitor feeds output from our payouts as part of our standard service and notify you of any issues. You will also be able to monitor the feed yourself if you want that extra layer of control and comfort.

What are key obstacles slowing down adoption of Cloud payout technology?

The slow and reluctant acceptance of IP transmission by distribution platforms such as satellite/cable headends is the major barrier to entry. There are many reasons for that resistance, ranging from lack of IT/IP expertise and reliance on SDI, to the fear of the revenue loss as clients seek to move from expensive satellite/fibre delivery to IP.

However, going back to the challenges faced by linear television, distribution platforms need to understand that they have to embrace IP to help their clients reduce costs of linear television operations. By helping broadcasters survive, they ensure their own future. Acceptance of IP feed delivery should become mainstream and that will also drive adoption of the Cloud payout even further, delivering substantial cost savings.

On the positive side, we see willingness of IP transport providers to offer not only technology but also service. So headends can employ their technology expertise in managing IP contribution. Also well established technology vendors such as Harmonic and Teradek are actively embedding IP protocols

(e.g. Zixi) in their IRDs/appliances further facilitating the transition.

Are there situations where Cloud payout may not be relevant?

The Cloud based solutions offer four core advantages (1) Global accessibility, (2) Efficiency of Pooling computing resources, (3) Scalability and Elasticity, and (4) Redundancy. In a few cases when broadcasters do not assign much value to these benefits, traditional hardware based payout can still do the job. If you are a small local channel with one local distribution point and no ambition to grow, no valuable content to distribute internationally and no concerns about downtime, it is indeed more cost-effective to buy a traditional channel-in-the-box and operate it remotely dealing with day to day problems.

On the other end of the spectrum, if a broadcaster runs a predominantly live news channel and a few seconds of latency make a difference, it makes sense to have your high-end hardware based payout located in the studio.

Does this mean live is not for Cloud payout?

Not at all. With an exception of a few 24/7 live news channels Cloud payout is ready to manage live events broadcasting. More specifically live IP feed contribution into Cloud payout is now gaining greater adoption across the board not only in linear television. Many professional cameras are now fitted with software allowing you to stream feeds via IP directly into the Cloud payout and switching between feeds is done in the Cloud.

How compatible is Cloud payout with VoD and are there benefits of combining the two in the Cloud?

The need to manage video-on-demand efficiently has led most media organisations to adopt the Cloud in their digital media departments long before their colleagues on the linear television side of business wanted to hear about it. The beauty is that Cloud payout can be easily integrated with the content libraries already sitting in Amazon S3 or Microsoft Azure.

Where do you see key challenges for broadcasters in harnessing benefits of the Cloud-based payout?

Cultural challenge seems to be playing the critical role in slowing down the adoption of IP and the Cloud as default technology for the industry. The majority of the broadcast engineers are still not trusting IP and long for the 'safety' of SDI/ASI whenever they can. However, it is no surprise that many of the leading broadcast services and technology companies are now run by ex-telecom and IT executives, Imagine Communications, EVS, Ericsson Broadcast and Media Services to name a few. It is inevitable that they gradually bring strategic and cultural change.