



Elegance of the private TV CDN cloud which can be fine-tuned to the exact needs of the application ecosystem

Which approach is best; complex platform adapted to a specific cloud framework or cloud framework tuned to a specific service requirements?

Over the last couple of years I've been involved in a number of private CDN projects where the main goal was/is to provide a modern on-line broadcasting solution from an elastic cloud infrastructure. I discovered that there is much confusion in the market simply due to industry acronyms and generalisation of popular 'cloud' labels which is now used/abused across the board with near every on-line service offering.

Every large operator who has already invested in their standard cloud infrastructure when expanding into OTT and/or IPTV services and have decided to build modern TV CDN always start the first meeting with the opening question: "We've just invested hugely in our cloud; can we utilise the resource as it is configured now to also deliver OVP TV CDN streaming services?" It is a very complex question which is impossible to answer until the fine details are analysed under a magnifying glass.

To move the discussion into a more productive direction covering all important angles, I devised a few bullet points which shed some light on the key topics which should be considered with equal attention to achieve the right answer.

So far, as per my 35 years of experience, the right way forward has always been to adopt cloud architecture to the application requirements rather than the other way around. Unified platform architecture is a great advantage when we are talking about such a complex application ecosystem as an end-to-end on-line TV platform, spanning from head-end IaaS, IPTV/OTT/ and OSS/BSS PaaS and encompassing globally spanning TV CDN. If you add requirement for advanced features like live TV rewind and network PVR paired with fully featured apps with support for live TV and VOD for all popular platforms including STBs, the deployment of unified platform configured from layer-1 up makes so much more sense than to go for traditional integrated approach; one can remove all the dangers of cost increase and delays due to third party integration complexities.

The key points are:

- 'Cloud' is just a generic fancy new expression for what we used to simply call online services. Cloud entered into the industry's jargon at the point when we originally only used it to describe virtualised server hardware which one could configure and scale via web interface. The problem we have now is that marketing campaigns use this expression for various online services. For example we now all tend to use the term 'cloud storage, as opposed to what we called in past an 'online storage'.
- There are various types of cloud services which focuses from B2B to B2C that does not have much to do with the original 'VMServer+Storage+Connectivity' cloud.
- TV CDN in itself is a specific type of cloud service and to be efficient one needs to architect it from layer-1 up.
- TV CDN infrastructure virtualisation and elasticity requirements are dramatically different than requirements for cloud which was designed for web site hosting or cloud designed for business suite apps serving.
- Once we consider all the pros and cons, we can quickly arrive to the conclusion that the only way to create a competitive and efficient TV CDN with the complete toolset to accommodate modern TV broadcast is to deploy bespoke unified solution like Perception TVCDN™ or similar.
- The Perception engineering team devised a specific VM ecosystem fine-tuned to provide the best infrastructure utilisation and a very user friendly cloud operation which was specifically designed to facilitate all the specifics of OVP e-commerce, live and VOD video delivery.
- Either reconfiguring or even changing the cloud framework, the good news is that the main asset which is infrastructure itself can be re-utilised by simply re-designed/re-engineered virtualisation framework which is a relatively fast exercise compared to any alternative.

I am definitely an eager promoter of the above described approach derived from my own practical experience. It is much simpler to reconfigure a cloud virtualisation framework rather than trying to adopt such a complex system as TV CDN end-to-end solutions is. Workarounds in trying to adapt a very complex application solution to a handicapped VM infrastructure which was originally configured to host on-line business applications, always turn out to be very time consuming and expensive and at the end delivers poor results.

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